

1/3

=> fil hcap  
FILE 'HCAPLUS' ENTERED AT 13:42:02 ON 29 APR 2005  
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FILE COVERS 1907 - 29 Apr 2005 VOL 142 ISS 19  
FILE LAST UPDATED: 28 Apr 2005 (20050428/ED)

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=> fil wpix  
FILE 'WPIX' ENTERED AT 13:42:07 ON 29 APR 2005  
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FILE LAST UPDATED: 27 APR 2005 <20050427/UP>  
MOST RECENT DERWENT UPDATE: 200527 <200527/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER  
GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
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FIRST VIEW - FILE WPIFV.  
FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/>  
FOR DETAILS. <<<

=> fil medlin  
FILE 'MEDLINE' ENTERED AT 13:42:11 ON 29 APR 2005

FILE LAST UPDATED: 28 APR 2005 (20050428/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

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=> fil biosis

FILE 'BIOSIS' ENTERED AT 13:42:14 ON 29 APR 2005  
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FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 27 April 2005 (20050427/ED)

FILE RELOADED: 19 October 2003.

=> fil jicst

FILE 'JICST-EPLUS' ENTERED AT 13:42:18 ON 29 APR 2005  
COPYRIGHT (C) 2005 Japan Science and Technology Agency (JST)

FILE COVERS 1985 TO 25 APR 2005 (20050425/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

=> fil agricola

FILE 'AGRICOLA' ENTERED AT 13:42:22 ON 29 APR 2005

FILE COVERS 1970 TO 6 Apr 2005 (20050406/ED)

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substance identification.

=> fil paperchem2

FILE 'PAPERCHEM2' ENTERED AT 13:42:26 ON 29 APR 2005  
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FILE COVERS 1967 TO 25 Apr 2005 (20050425/ED)

=> fil embase

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FILE COVERS 1974 TO 28 Apr 2005 (20050428/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

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=> fil scisearch

FILE 'SCISEARCH' ENTERED AT 13:42:34 ON 29 APR 2005

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FILE COVERS 1974 TO 28 Apr 2005 (20050428/ED)

=> fil cancerlit

FILE 'CANCERLIT' ENTERED AT 13:42:38 ON 29 APR 2005

FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> fil conf

FILE 'CONF' ENTERED AT 13:42:47 ON 29 APR 2005

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FILE LAST UPDATED: 29 APR 2005 <20050429/UP>

FILE COVERS 1976 TO DATE.

=> fil confsci

FILE 'CONFSCI' ENTERED AT 13:42:54 ON 29 APR 2005

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FILE COVERS 1973 TO 18 Mar 2005 (20050318/ED)

=> file stnguide

FILE 'STNGUIDE' ENTERED AT 13:43:02 ON 29 APR 2005

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Apr 22, 2005 (20050422/UP).

=&gt; d que 165

L7 QUE ABB=ON PLU=ON (?AMMON? OR NH4# OR NH4)  
 L8 QUE ABB=ON PLU=ON (OH OR OH# OR ?HYDROX?)  
 L9 QUE ABB=ON PLU=ON (?HCO3? OR CO3? OR ?CARBONAT? OR ?CARBONIC? OR ?BICARBON? OR (HYDROGEN(1W)CARBONAT?) OR (HYDROGEN(1W)CARBONIC))  
 L10 QUE ABB=ON PLU=ON (?SYNTHE? OR ?PREP? OR ?PROC? OR ?PRODUCE? OR FORM? OR YIELD? OR GIVING OR GIVE OR GAVE)  
 L12 47947 SEA FILE=HCAPLUS ABB=ON PLU=ON QUAT?/OBI (3A) ((?AMMON?/OBI OR NH4#/OBI OR NH4/OBI))  
 L14 9010 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND ((OH/OBI OR OH#/OBI OR ?HYDROX?/OBI))  
 L15 1971 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND ((?HCO3?/OBI OR CO3?/OBI OR ?CARBONAT?/OBI OR ?CARBONIC?/OBI OR ?BICARBON?/OBI OR (HYDROGEN/OBI(1W)CARBONAT?/OBI) OR (HYDROGEN/OBI(1W)CARBONIC/OBI)))  
 L20 5831 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (5A) ((?SYNTHE?/OBI OR ?PREP?/OBI OR ?PROC?/OBI OR ?PRODUCE?/OBI OR FORM?/OBI OR YIELD?/OBI OR GIVING/OBI OR GIVE/OBI OR GAVE/OBI))  
 L21 1284 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 (5A) ((?SYNTHE?/OBI OR ?PREP?/OBI OR ?PROC?/OBI OR ?PRODUCE?/OBI OR FORM?/OBI OR YIELD?/OBI OR GIVING/OBI OR GIVE/OBI OR GAVE/OBI))  
 L27 QUE ABB=ON PLU=ON (?HALO? OR ?HALID? OR CL OR CL# OR ?CHLOR? OR BR OR BR# OR ?BROM? OR F OR F# OR ?FLUOR? OR I OR I# OR ?IODI? OR ?IODO?)  
 L28 13480 SEA FILE=HCAPLUS ABB=ON PLU=ON (?QUAT? (3A) L7) (3A) L27  
 L29 1181 SEA FILE=HCAPLUS ABB=ON PLU=ON (L20 OR L21) AND L28  
 L30 446202 SEA FILE=HCAPLUS ABB=ON PLU=ON ?ALCOHOL?/OBI  
 L31 183 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L30  
 L33 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND WOOD?/SC,SX  
 L34 558 SEA FILE=HCAPLUS ABB=ON PLU=ON "QUATERNARY AMMONIUM COMPOUNDS (L) HYDROXIDES"+PFT,NT/CT  
 L35 172291 SEA FILE=HCAPLUS ABB=ON PLU=ON "QUATERNARY AMMONIUM COMPOUNDS "+PFT,NT/CT  
 L36 11381 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 (L) L8  
 L37 1496 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 (L) L9  
 L38 67938 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 (L) L27  
 L39 4759 SEA FILE=HCAPLUS ABB=ON PLU=ON L38 (L) (RACT+NT)/RL  
 L40 57 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 (L) (PREP+NT)/RL  
 L41 61 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 (L) (PROC+NT)/RL  
 L42 104 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 (L) (PREP+NT)/RL  
 L43 43 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 (L) (PROC+NT)/RL  
 L44 564 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 (L) (PREP+NT)/RL  
 L45 1283 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 (L) (PROC+NT)/RL  
 L46 90 SEA FILE=HCAPLUS ABB=ON PLU=ON (L42 OR L43 OR L44 OR L45) AND L39  
 L47 2 SEA FILE=HCAPLUS ABB=ON PLU=ON (L40 OR L41) AND L39  
 L48 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND (L40 OR L41 OR L42 OR L43 OR L44 OR L45)  
 L49 98 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND (L40 OR L41 OR L42 OR L43 OR L44 OR L45)  
 L50 13 SEA FILE=HCAPLUS ABB=ON PLU=ON (L46 OR L47 OR L48 OR L49) AND L30  
 L51 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L50 AND (L40 OR L42 OR L44)  
 L53 33024 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 (3A) ((OH/OBI OR OH#/OBI OR ?HYDROX?/OBI))  
 L54 10581 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 (3A) ((?HCO3?/OBI OR CO3?/OBI OR ?CARBONAT?/OBI OR ?CARBONIC?/OBI OR ?BICARBON?/OBI OR (HYDROGEN/OBI(1W)CARBONAT?/OBI) OR (HYDROGEN/OBI(1W)CARBONIC/OBI)))

L55 10597 SEA FILE=HCAPLUS ABB=ON PLU=ON (L53 OR L54) (5A) L10  
 L56 117285 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 (3A) ((?HALO?/OBI OR  
 ?HALID?/OBI OR CL/OBI OR CL#/OBI OR ?CHLOR?/OBI OR BR/OBI OR  
 BR#/OBI OR ?BROM?/OBI OR F/OBI OR F#/OBI OR ?FLUOR?/OBI OR  
 I/OBI OR I#/OBI OR ?IODI?/OBI OR ?IODO?/OBI))  
 L57 2356 SEA FILE=HCAPLUS ABB=ON PLU=ON L55 AND L56  
 L58 82 SEA FILE=HCAPLUS ABB=ON PLU=ON L55 (7A) ?ALCOHOL?  
 L59 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L58 AND L57  
 L60 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L59 AND ((TERT-AMINES)/TI OR  
 (TETRAALKYLAMMONIUM SALTS)/TI)  
 L63 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND ((?WATER/OBI(1W)PROOF?  
 /OBI) OR ?PRESERV?/OBI)  
 L64 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 AND (WOOD? OR ?IRRITAT?  
 OR DISINFECTION)/TI  
 L65 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 OR L51 OR L60 OR L64

=> d que 183

L66 2784 SEA FILE=WPIX ABB=ON PLU=ON (A01N033-02 OR A01N033-04 OR  
 A01N033-12 OR C07C211-62 OR C07C211-63)/IPC  
 L67 24476 SEA FILE=WPIX ABB=ON PLU=ON (C10-A21 OR C10-A22 OR B10-A21  
 OR B10-A22 OR E10-A22? OR E10-A21)/MC  
 L68 10220 SEA FILE=WPIX ABB=ON PLU=ON A01N047?/IPC  
 L69 15728 SEA FILE=WPIX ABB=ON PLU=ON ((?AMMON?/BIX OR NH4#/BIX OR  
 NH4/BIX)) (3A) ((OH/BIX OR OH#/BIX OR ?HYDROX?/BIX))  
 L70 7562 SEA FILE=WPIX ABB=ON PLU=ON ((?AMMON?/BIX OR NH4#/BIX OR  
 NH4/BIX)) (3A) ((?HCO3?/BIX OR CO3?/BIX OR ?CARBONAT?/BIX OR  
 ?CARBONIC?/BIX OR ?BICARBON?/BIX OR (HYDROGEN/BIX(1W)CARBONAT?/  
 BIX) OR (HYDROGEN/BIX(1W)CARBONIC/BIX)))  
 L81 543 SEA FILE=WPIX ABB=ON PLU=ON C07C209-68/IPC  
 L82 62 SEA FILE=WPIX ABB=ON PLU=ON (L66 OR L67 OR L68) AND L81  
 L83 18 SEA FILE=WPIX ABB=ON PLU=ON L82 AND ((L69 OR L70))

=> d his 192

(FILE 'MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, AGRICOLA, PAPERCHEM2,  
 EMBASE, SCISEARCH' ENTERED AT 13:07:33 ON 29 APR 2005)

L92 1 S L90-L91

=> d que 192

L7 QUE ABB=ON PLU=ON (?AMMON? OR NH4# OR NH4)  
 L8 QUE ABB=ON PLU=ON (OH OR OH# OR ?HYDROX?)  
 L9 QUE ABB=ON PLU=ON (?HCO3? OR CO3? OR ?CARBONAT? OR ?CA  
 RBONIC? OR ?BICARBON? OR (HYDROGEN(1W)CARBONAT?) OR (HYDR  
 OGEN(1W)CARBONIC))  
 L10 QUE ABB=ON PLU=ON (?SYNTH? OR ?PREP? OR ?PROC? OR ?PR  
 ODOC? OR FORM? OR YIELD? OR GIVING OR GIVE OR GAVE)  
 L27 QUE ABB=ON PLU=ON (?HALO? OR ?HALID? OR CL OR CL# OR ?  
 CHLOR? OR BR OR BR# OR ?BROM? OR F OR F# OR ?FLUOR? OR I  
 OR I# OR ?IODI? OR ?IODO?)  
 L61 QUE ABB=ON PLU=ON (?WATER(1W)PROOF?) OR ?PRESERV?  
 L84 14677 SEA L7(3A) L8  
 L85 6214 SEA L7(3A) L9  
 L86 154928 SEA L7(3A) L27  
 L87 2717 SEA (L84 OR L85) (5A) L10  
 L88 669 SEA L87 (L) L86  
 L89 21 SEA L88 (L) (?ALCOHOL? OR ALC)  
 L90 1 SEA L89 AND L61  
 L91 1 SEA L89 AND (?WOOD? OR ?TIMBER? OR ?LUMBER?)

L92                    1 SEA (L90 OR L91)

=> dup rem l65 l83 l92

FILE 'HCAPLUS' ENTERED AT 13:43:54 ON 29 APR 2005

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PROCESSING COMPLETED FOR L65

PROCESSING COMPLETED FOR L83

PROCESSING COMPLETED FOR L92

L101                    34 DUP REM L65 L83 L92 (2 DUPLICATES REMOVED)

                      ANSWERS '1-17' FROM FILE HCAPLUS

                      ANSWERS '18-33' FROM FILE WPIX

                      ANSWER '34' FROM FILE BIOSIS

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L101 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2004:960218 HCAPLUS

DOCUMENT NUMBER: 141:410621

TITLE: Preparation of high-purity  
tetraalkylammonium hydroxides from  
tetraalkylammonium salts

INVENTOR(S): Nakano, Rieko; Kanno, Yuichi; Abe, Takafumi

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004315375	A2	20041111	JP 2003-107818	20030411
PRIORITY APPLN. INFO.:			JP 2003-107818	20030411

OTHER SOURCE(S): CASREACT 141:410621; MARPAT 141:410621

ED Entered STN: 11 Nov 2004

AB The hydroxides are prepared by anion exchange of the salts (R1R2R3R4N+)nXn- [R1-R4 = alkyl; X- = (in)organic anion other than OH-; n = anion valence] with strongly basic ion exchangers in solvents containing alcs. Thus, a MeOH solution of Pr4N+Br- was passed through Purolite SGA 550 (OH-type ion exchanger) and condensed to give a MeOH solution of Pr4N+OH- showing content of Br- 90 ppm with 89.5% yield.

IC ICM C07C209-68

ICS C07C209-84; C07C211-63

CC 23-4 (Aliphatic Compounds)

ST tetraalkylammonium hydroxide prepn strongly basic anion exchange; alc solvent anion exchange tetraalkylammonium salt hydroxide; methanol solvent tetrapropylammonium bromide hydroxide anion exchange; tetrapropylammonium hydroxide prepn

IT Alcohols, uses

RL: NUU (Other use, unclassified); USES (Uses)

(Cl-4; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)

IT Solvents

(organic, water-insol., solvents for extraction of alcs.; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)

IT Anion exchange

(preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)

IT Anion exchangers

(strongly basic; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)

IT Quaternary ammonium compounds, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(tetraalkyl, halides; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of

- tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT **Quaternary ammonium compounds, preparation**  
 RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)  
 (tetraalkyl, hydroxides; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT **Quaternary ammonium compounds, reactions**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (tetraalkyl, sulfates, carbonates, formates, acetates, lactates,  $\alpha$ -hydroxyisolate; prepn of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT **4499-86-9P, Tetrapropylammonium hydroxide**  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT 67-56-1, Methanol, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT **56-34-8, Tetraethylammonium chloride**  
**75-59-2, Tetramethylammonium hydroxide**  
**1941-30-6, Tetrapropylammonium bromide**  
**59138-84-0, Tetramethylammonium formate** 791603-28-6, Purolite SGA 550  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT 110-54-3, Hexane, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent for extraction of alcs.; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)
- IT 7732-18-5, Water, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent; preparation of high-purity tetraalkylammonium hydroxides by ion exchange of tetraalkylammonium salts with strongly basic ion exchangers in solvents containing alcs.)

=> d ibib ed ab hitind 2-17

L101 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
 ACCESSION NUMBER: 1995:740914 HCAPLUS  
 DOCUMENT NUMBER: 123:115967  
 TITLE: **Preparation of quaternary ammonium compounds and waterproofing/preservative compositions for wood**  
 INVENTOR(S): Walker, Leigh  
 PATENT ASSIGNEE(S): Lonza Inc., USA



SOURCE: PCT Int. Appl., 105 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9428715	A1	19941222	WO 1994-US6699	19940609
W: AT, AU, BB, BG, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5399762	A	19950321	US 1993-74313	19930609
US 5438034	A	19950801	US 1993-74312	19930609
US 5641726	A	19970624	US 1993-74136	19930609
ZA 9403999	A	19950203	ZA 1994-3999	19940607
CA 2162128	AA	19941222	CA 1994-2162128	19940609
CA 2162128	C	20031014		
CA 2315849	AA	19941222	CA 1994-2315849	19940609
CA 2365054	AA	19941222	CA 1994-2365054	19940609
CA 2365054	C	20040406		
CA 2365298	AA	19941222	CA 1994-2365298	19940609
CA 2365298	C	20040413		
AU 9471076	A1	19950103	AU 1994-71076	19940609
EP 702517	A1	19960327	EP 1994-920194	19940609
EP 702517	B1	20040915		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08511543	T2	19961203	JP 1994-502177	19940609
IL 122727	A1	19990312	IL 1994-122727	19940609
IL 122728	A1	19990312	IL 1994-122728	19940609
IL 122729	A1	19990312	IL 1994-122729	19940609
IL 122730	A1	19990312	IL 1994-122730	19940609
IL 109964	A1	19990922	IL 1994-109964	19940609
IL 124041	A1	20000131	IL 1994-124041	19940609
TW 427879	B	20010401	TW 1994-83105244	19940609
EP 1114704	A2	20010711	EP 2001-100855	19940609
EP 1114704	A3	20010808		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
EP 1122044	A1	20010808	EP 2001-101120	19940609
EP 1122044	B1	20050420		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
EP 1121857	A1	20010808	EP 2001-101121	19940609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
AT 275822	E	20041015	AT 1994-920194	19940609
US 5559155	A	19960924	US 1994-349448	19941205
US 5523487	A	19960604	US 1995-410888	19950327
US 5700841	A	19971223	US 1996-635431	19960418
US 5891921	A	19990406	US 1996-635430	19960418
US 6090855	A	20000718	US 1996-635441	19960418
US 5760088	A	19980602	US 1996-676464	19960708
US 5855817	A	19990105	US 1997-890130	19970709
US 6087303	A	20000711	US 1997-890949	19970710
PRIORITY APPLN. INFO.:			US 1993-74136	A 19930609
			US 1993-74312	A 19930609

US 1993-74313	A 19930609
US 1993-74314	A 19930609
CA 1994-2162128	A3 19940609
EP 1994-920194	A3 19940609
IL 1994-109964	A3 19940609
WO 1994-US6699	W 19940609
US 1994-349448	A3 19941205
US 1995-410888	A3 19950327
US 1996-635431	A1 19960418

OTHER SOURCE(S): MARPAT 123:115967

ED Entered STN: 17 Aug 1995

AB C1-20 alkyl or aryl-substituted alkyl and C8-20 alkyl quaternary ammonium hydroxides are prepared by reacting C1-20 alkyl or aryl-substituted alkyl and C8-20 alkyl **quaternary ammonium chlorides** with metal hydroxides in a C1-4 normal alc. solvent, the metal hydroxide being in an amount sufficient to yield the hydroxides. Quaternary ammonium carboxylates and carbonates wood preservatives are also claimed. Didecyldimethylammonium chloride (I) was treated in aqueous ethanol was treated with a stoichiometric amount of KOH to give didecyldimethylammonium hydroxide (II). Wood pieces were soaked in a solution of II for 24 h to give a weight pickup of 2.5%, soaked in water for 24 h and then 96 h to give retention of II 92% and 72%, resp., compared to I with 24 h uptake 0.6% and retention of 83% and 67%, (0.4% weight uptake for water alone).

IC ICM A01N031-14

ICS A01N033-12; A01N037-02; A01N037-06; A01N037-10; A01N043-16; B27K003-00; B27K003-34; B27K003-36; B27K003-38; B27K003-50; B27K003-52; C07C043-13; C07C043-205; C07C053-10; C07C53 -122; C07C53 -124; C07C53 -126; C07C69 -67; C07C69 -675

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

ST **quaternary ammonium wood preservative**; didecyldimethylammonium **hydroxide** carboxylate wood **preservative**; waterproofing wood **preservative** compn

IT Wood **preservatives**

(didecyldimethylammonium **hydroxide**, carboxylates and **carbonates**; manufacture and use of)

IT **Alcohols**, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(C1-4, in wood **preservative** composition **preparation**)

IT Waterproofing

(agents, in wood **preservative** compns.)

IT 67-63-0, 2-Propanol, uses 71-23-8, 1-Propanol, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(in wood **preservative** composition **preparation**)

IT 124-38-9, Carbon dioxide, reactions 1310-58-3, Potassium **hydroxide**, reactions 1310-73-2, Sodium **hydroxide** (Na(OH)), reactions 7173-51-5, Didecyldimethylammonium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)  
(in wood **preservative** composition **preparation**)

IT 20256-56-8DP, Didecyldimethylammonium, coco alkyl fatty acid salts 82703-30-8P, Didecyldimethylammonium acetate 97931-37-8P 125204-95-7P, biological studies 138194-91-9P 148788-55-0P 166438-54-6P 166438-55-7P 166438-56-8P, biological studies 166438-57-9P, biological studies

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(in wood **preservative** compns.)

IT 23381-52-4P

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(in wood **preservative** compns.)  
 IT 64-17-5, Ethanol, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent; in wood **preservative** composition **preparation**)  
 IT 111-60-4, Ethylene glycol monostearate 627-83-8, Ethylene glycol distearate 1323-39-3, Propylene glycol monostearate 1338-41-6, Sorbitan monostearate 9005-08-7, Polyethylene glycol distearate 26658-19-5, Sorbitan tristearate 27215-38-9, Glycerol monolaurate 31566-31-1, Glycerol monostearate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (waterproofing agent; in wood **preservative** compns.)

L101 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:75633 HCAPLUS

DOCUMENT NUMBER: 142:137128

TITLE: Liquid fabric softener compositions and their application method

INVENTOR(S): Ushio, Noriaki; Yamamoto, Masatsugu; Tagata, Shuji

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005023452	A2	20050127	JP 2003-187757	20030630
PRIORITY APPLN. INFO.:			JP 2003-187757	20030630

ED Entered STN: 28 Jan 2005

AB The compns., which show good softening effect even using water containing detergent residues, contain  $\geq 9/2$  weight ratio of (A) tertiary amines, their salts, and/or quaternary ammonium salts having  $\geq 2$  C10-14 hydrocarbyl groups and (B) tertiary amines, their salts, and/or quaternary ammonium salts having C16-22 hydrocarbyl group. Fiber products are treated with media containing the compns. and H2O at fiber product/A weight ratio

of 3000/1-50/1. Thus, a fabric softener was formulated containing N,N-dialkanoyloxyethyl-N,N-dimethylammonium chloride (manufactured using 1:1 lauric acid/myristic acid mixture) 20, MgCl2 0.20, and H2O to 100%.

IC ICM D06M013-463

ICS D06M013-328

CC 46-5 (Surface Active Agents and Detergents)

ST liq fabric softener higher alkyl amine; **quaternary ammonium** higher alkyl fabric softener

IT **Quaternary ammonium compounds, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(bis(alkanoyloxyethyl)(**hydroxyethyl**)methyl, Me sulfates; liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT **Quaternary ammonium compounds, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**chlorides**, bis(alkanoyloxyethyl)dimethyl; liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT **Quaternary ammonium compounds, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
 (dialkyldimethyl, **chlorides**; liquid fabric softener compns.  
 containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT Fabric softeners  
 (liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT Amines, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (tertiary; liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT 74-89-5DP, Methylamine, reaction **products** with fatty **alcs.**, quaternized 102-71-6DP, Triethanolamine, esters with fatty acids, quaternized 105-59-9DP, fatty acid esters, quaternized 112-53-8DP, Lauryl **alcohol**, reaction **products** with methylamine, quaternized 112-72-1DP, Myristyl **alcohol**, reaction **products** with methylamine, quaternized 143-07-7DP, Lauric acid, esters with alkanolamines, quaternized 544-63-8DP, Myristic acid, esters with alkanolamines, quaternized  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

IT 104-68-7, Diethylene glycol monophenyl ether 122-99-6, 2-Phenoxyethanol 7204-16-2, Triethylene glycol monophenyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (solvent; liquid fabric softener compns. containing higher alkyl tertiary amines or **quaternary ammonium salts**)

L101 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:531397 HCAPLUS

DOCUMENT NUMBER: 141:76837

TITLE: **Quaternary ammonium esters for disinfection and preservation**

INVENTOR(S): Salamone, Joseph C.; Ozark, Richard; Hu, Zhenze; Borazjani, Roya Nicole

PATENT ASSIGNEE(S): Bausch & Lomb Incorporated, USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004054630	A1	20040701	WO 2003-US38434	20031203
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 2002-433624P	P 20021213
			IS 2003-10	A 20030411

OTHER SOURCE(S): MARPAT 141:76837

ED Entered STN: 02 Jul 2004  
AB The use of one or more quaternary ammonium ester compns. to disinfect contact lenses and preserve ophthalmic lens compns. is described. Ophthalmic lens compns. containing one or more quaternary ammonium ester compns. and methods of making and using the same are also described. A compound N-myristoyloxypropyl-N-benzyl-N,N-dimethylammonium chloride was prepared, and its bactericidal and fungicidal activity was tested.  
IC ICM A61L012-14  
ICS A61K031-16  
CC 63-7 (Pharmaceuticals)  
ST **quaternary ammonium ester prepn** disinfect contact lense  
IT Acid halides  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(acid chlorides; **preparation of quaternary ammonium** esters for disinfection and **preservation**)  
IT Esters, **preparation**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(amino; **preparation of quaternary ammonium** esters for disinfection and **preservation**)  
IT **Quaternary ammonium** compounds, biological studies  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(ester group-containing; **quaternary ammonium** esters for disinfection and **preservation**)  
IT Antibacterial agents  
Contact lenses  
Fungicides  
Sterilization and Disinfection  
(**quaternary ammonium** esters for disinfection and **preservation**)  
IT 7803-49-8, **Hydroxyamine**, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**preparation of quaternary ammonium** esters for disinfection and **preservation**)  
IT 701909-26-4P 701909-27-5P 701909-28-6P 701909-29-7P 701909-30-0P  
701909-31-1P 701909-32-2P 701909-33-3P 701909-34-4P 701909-35-5P  
701909-36-6P 701909-37-7P 701909-38-8P 701909-40-2P 713102-82-0P  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(**quaternary ammonium** esters for disinfection and **preservation**)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 5\_OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:793517 HCAPLUS

DOCUMENT NUMBER: 137:296427

TITLE: Environmentally friendly method for protective treatment of **wood** and **timber products**

INVENTOR(S): Fritschi, Joachim; Lichtenberg, Florian; Marx, Hans-Norbert

PATENT ASSIGNEE(S): Lonza A.-G., Switz.

SOURCE: PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002081159	A2	20021017	WO 2002-EP3308	20020325
WO 2002081159	A3	20030109		
WO 2002081159	C1	20050317		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1377417	A2	20040107	EP 2002-735172	20020325
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004146733	A1	20040729	US 2004-473746	20040322
PRIORITY APPLN. INFO.:				
			EP 2001-108389	A 20010403
			WO 2002-EP3308	W 20020325

OTHER SOURCE(S): MARPAT 137:296427

ED Entered STN: 18 Oct 2002

AB The title method comprises heat treatment of wood, timber products and wood-type substrates at 60-250°C followed by treatment with specified amines, amine oxides or quaternary ammonium compds. which can be used as 0.1-20% solns. in H<sub>2</sub>O or organic solvents. The solns. may contain insecticides, colorants, penetration agents, H<sub>2</sub>O-repellents, etc. The treated wood has good resistance even to harmful organisms which cannot be reliably controlled by means of only a heat treatment. Typical solution used for the title purpose contained 0.5% cocodimethylamine and 0.5 % lactic acid in H<sub>2</sub>O.

IC ICM B27K

CC 43-2 (Cellulose, Lignin, Paper, and Other Wood Products)

IT Amine oxides

RL: NUU (Other use, unclassified); USES (Uses)

(C12-16-alkyldimethyl, Barlox 12; amine solns. for protective treatment of heat-treated wood and derived timber products)

IT **Quaternary ammonium** compounds, uses

RL: NUU (Other use, unclassified); USES (Uses)

(alkylbenzyltrimethyl, **chlorides**; amine solns. for protective treatment of heat-treated wood and derived timber products)

IT Wood

Wood **preservatives**

(amine solns. for protective treatment of heat-treated wood and derived timber products)

IT 1875-92-9D, Benzyltrimethylammonium chloride, coco alkyl derivs.

2372-82-9, Lonzabac 12 2571-88-2, Barlox 18 7128-91-8, Barlox 16

7173-51-5, Didecyltrimethylammonium chloride 94667-33-1, Bardap 26

148788-55-0, Didecyltrimethylammonium **carbonate**

RL: NUU (Other use, unclassified); USES (Uses)

(amine solns. for protective treatment of heat-treated wood and derived timber products)

IT 50-21-5D, Lactic acid, tertiary amine salts 124-40-3D, Dimethylamine, coco alkyl derivs., lactate salts

RL: NUU (Other use, unclassified); USES (Uses)

(wood treatment agents; amine solns. for protective treatment of heat-treated wood and derived timber products)

L101 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:755222 HCAPLUS  
 DOCUMENT NUMBER: 137:268148  
 TITLE: Hair conditioner compositions containing  
**quaternary ammonium** compounds that  
 are non-irritating to eyes  
 INVENTOR(S): Alvarado, Robert M.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002143063	A1	20021003	US 2001-771868	20010129
US 6537533	B2	20030325		

PRIORITY APPLN. INFO.: US 2001-771868 20010129

ED Entered STN: 04 Oct 2002

AB The invention relates to hair conditioner compns. that are non-irritating to the eye. The compns. comprise: (a) a C20-24 quaternary ammonium compound, which has ethosulfate or methosulfate as an anion; (b) a second C20-24 **quaternary ammonium** compound, which has **chloride** or bromide as an anion; a compound which is solid at room temperature and which is selected from the group consisting of a fatty alc., an ester, an amine, an amide, an acid, and a water-soluble polymer; optionally a compound, which is liquid at room temperature, selected from the group consisting of

a water insol. emollient, a water-insol. lubricant, and a water-insol. conditioning compound; and wherein (a) and (b) are present in a weight ratio of 1:10-10:1; are described. A composition contained soft water 93.09, behentrimonium methosulfate 0.625, cetearyl alc. 1.875, behentrimonium chloride 0.625, iso-PrOH 0.125, stearyl alc. 0.75, Cetearth-20 0.255, disodium EDTA 0.10, amodimethicone 0.51 (and) cetrimonium chloride 0.12 (and) trideceth-12 0.037, cyclopentasiloxane 1.258, methylchloroisothiazolinone and methylisothiazolinone 0.05, DMDM hydantoin 0.110, and fragrance 0.5% by weight

IC ICM A61K007-075

ICS A61K007-08; A61K031-14; A01N033-12

INCL 514642000

CC 62-3 (Essential Oils and Cosmetics)

ST eye nonirritating hair conditioner **quaternary ammonium**

IT **Quaternary ammonium** compounds, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (C20-24; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)

IT **Quaternary ammonium** compounds, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Dibehenyl/diarachidyl derivs.; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)

IT Polysiloxanes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 ((aminoethyl)aminolpropyl **hydroxy**, di-Me; hair conditioner compns. containing **quaternary ammonium** compds. that are

- non-irritating to eyes)
- IT **Quaternary ammonium** compounds, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(bromides; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT **Quaternary ammonium** compounds, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(chlorides; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT **Hair preparations**  
(conditioners; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Cosmetics  
(emollients; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Alcohols, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(fatty; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Lubricants  
**Preservatives**  
(hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Amides, biological studies  
Amines, biological studies  
Esters, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Viscosity  
(modifiers; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Cosmetics  
(moisturizers; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT Polymers, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(water-soluble; hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)
- IT 112-85-6, Behenic acid 294-40-6, Cyclopentasiloxane 661-19-8, Behenyl alcohol 661-19-8D, Behenyl alcohol, derivs. 16841-14-8, Behenalkonium chloride 17301-53-0, Behentrimonium chloride 68797-65-9, Behenamidopropylethyldimonium ethosulfate 69537-38-8 136920-10-0 463965-85-7, Behentrimonium methosulfate  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair conditioner compns. containing **quaternary ammonium** compds. that are non-irritating to eyes)

L101 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:403892 HCAPLUS

DOCUMENT NUMBER: 136:403528

TITLE: Corrosion resistant sanitizing/disinfecting cleaning  
and wood preservative  
formulation

INVENTOR(S): Daun, Dennis; Burlew, James O.; Dewolf, Robert H.

PATENT ASSIGNEE(S): Mason Chemical Company, USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent



LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6395698	B1	20020528	US 2001-878899	20010611

PRIORITY APPLN. INFO.: US 2001-878899 20010611

OTHER SOURCE(S): MARPAT 136:403528

ED Entered STN: 30 May 2002

AB A corrosion inhibiting, sanitizing/disinfecting, wood preserving and hard surface cleaning formulation comprises about 18.5-25% **quaternary ammonium halide**; 3-6% sequestrant in a sufficient amount to sequester the halide ion without eliminating the quaternary ammonium ion's sanitizing/disinfecting capability, wood preserving characteristics, and hard surface cleaning ability; 20-30% alkanol solvent; 3-9% ethoxylated long chain alc. and water.

IC ICM C11D001-62  
 ICS C11D001-835; C11D003-43

INCL 510384000

CC 46-6 (Surface Active Agents and Detergents)

ST cleaning disinfecting compn **quaternary ammonium halide** sequestrant

IT Alcohols, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (C10-12, ethoxylated; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT Alcohols, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (C12-14, ethoxylated; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT **Quaternary ammonium** compounds, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (alkylbenzyl dimethyl, **chlorides**; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT **Quaternary ammonium** compounds, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**chlorides**; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT Corrosion-resistant materials  
 Sequestering agents  
 Wood **preservatives**  
 (corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT **Quaternary ammonium** compounds, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT Disinfectants  
 (detergent; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT Detergents  
 (disinfectant; corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT 102-71-6, Triethanolamine, uses 111-42-2, Diethanolamine, uses  
 141-43-5, Ethanolamine, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (corrosion resistant sanitizing/disinfecting cleaning and wood **preservative formulation**)

IT 5538-94-3, Dioctyl dimethyl ammonium chloride 7173-51-5, Didecyl dimethyl ammonium chloride 32426-11-2, Octyl decyl dimethyl ammonium chloride  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (corrosion resistant sanitizing/disinfecting cleaning and wood preservative formulation)

IT 62-33-9, Calcium disodium ethylenediaminetetraacetic acid 139-41-3, Dihydroxyethylglycine, sodium salt 140-01-2, Diethylenetriaminepentaacetic acid, pentasodium salt 2235-43-0, Amino tri-(methylene phosphonic acid) pentasodium salt 2809-21-4, 1-Hydroxyethylidene-1,1-diphosphonic acid 3794-83-0, 1-Hydroxyethylidene-1,1-diphosphonic acid, tetrasodium salt 4263-06-3, N-Hydroxyethylenediaminetriacetic acid, trisodium salt 4896-78-0, N-Hydroxyethylenediaminetriacetic acid 15827-60-8, Diethylenetriaminepenta(methylene phosphonic acid) 53473-28-2, Hexamethylenediaminetetra(methylene phosphonic acid), hexapotasium salt 61792-09-4, Diethylenetriaminepenta(methylene phosphonic acid), pentasodium salt  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sequestrant; corrosion resistant sanitizing/disinfecting cleaning and wood preservative formulation)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:129107 HCAPLUS

DOCUMENT NUMBER: 136:167084

TITLE: Purification of **quaternary ammonium** salts by recrystallization

INVENTOR(S): Taki, Takayuki; Asano, Satoshi; Takatsuna, Kazutoshi

PATENT ASSIGNEE(S): Tonen Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002053532	A2	20020219	JP 2000-239075	20000807
PRIORITY APPLN. INFO.:			JP 2000-239075	20000807
OTHER SOURCE(S): MARPAT 136:167084				

ED Entered STN: 19 Feb 2002

AB The salts are recrystd. from solvents containing alcs. and aliphatic carbonates for purification. The purified salts show low water content and are useful for electrolyte solns. for electronic parts. Thus, triethylmethylammonium tetrafluoroborate containing 150 ppm H<sub>2</sub>O was recrystd. from 93/7 (by weight) di-Me carbonate-EtOH mixture to show water content 14 ppm with 94.4% recovery.

IC ICM C07C209-84

ICS C07C211-63

CC 23-4 (Aliphatic Compounds)

Section cross-reference(s): 76

ST **quaternary ammonium** recrystn solvent alc

**carbonate**; electrolyte ethylmethylammonium recrystn ethanol **carbonate**

IT Solvents

(organic; purification of **quaternary ammonium** salts by recrystn. from **alc.-carbonate** mixts.)

- IT Electrolytes  
Recrystallization  
(purification of **quaternary ammonium** salts by recrystn.  
from **alc.-carbonate** mixts.)
- IT **Alcohols, uses**  
RL: NUU (Other use, unclassified); USES (Uses)  
(purification of **quaternary ammonium** salts by recrystn.  
from **alc.-carbonate** mixts.)
- IT **Quaternary ammonium compounds, preparation**  
RL: PEP (Physical, engineering or chemical process); PUR  
(Purification or recovery); PYP (Physical process);  
PREP (Preparation); PROC (Process)  
(purification of **quaternary ammonium** salts by recrystn.  
from **alc.-carbonate** mixts.)
- IT 64-17-5, Ethanol, uses 67-63-0, Isopropyl alcohol, uses  
616-38-6, Dimethyl **carbonate** 623-53-0, Ethyl methyl  
**carbonate**  
RL: NUU (Other use, unclassified); USES (Uses)  
(purification of **quaternary ammonium** salts by recrystn.  
from **alc.-carbonate** mixts.)
- IT 69444-47-9P, Triethylmethylammonium tetrafluoroborate  
120226-79-1P, Triethylmethylammonium perchlorate  
RL: PEP (Physical, engineering or chemical process); PUR (Purification or  
recovery); PYP (Physical process); PREP (Preparation); PROC (Process)  
(purification of **quaternary ammonium** salts by recrystn.  
from **alc.-carbonate** mixts.)
- IT 7732-18-5, Water, **processes**  
RL: PEP (Physical, engineering or chemical process); PYP (Physical  
process); REM (Removal or disposal); PROC (Process)  
(removal of; purification of **quaternary ammonium** salts  
by recrystn. from **alc.-carbonate** mixts.)

L101 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:854943 HCAPLUS

DOCUMENT NUMBER: 136:124354

TITLE: One-Way Extraction of a Chemical Potential through a  
Liquid Membrane: Concept Demonstration and  
Applications

AUTHOR(S): Lavie, Zohar; Rothenberg, Gadi; Sasson, Yoel

CORPORATE SOURCE: Casali Institute of Applied Chemistry, Hebrew  
University of Jerusalem, Jerusalem, 91904, Israel

SOURCE: Industrial & Engineering Chemistry Research (2001),  
40(26), 6045-6050

CODEN: IECRED; ISSN: 0888-5885

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 27 Nov 2001

AB A novel concept for the preparation of hydroxide compds. using liquid/liquid  
anion

exchange is presented. The exchange reaction is following:  $\text{NaOH} + \text{MCl}$   
 $\rightarrow \text{NaCl} + \text{MOH}$ ; here M is K, Li, Cs, or  $\text{Et}_4\text{N}$ . The exchange is  
accomplished by loading a chemical potential into a liquid organic membrane and  
subsequently releasing it from the membrane using an onium-alcoholate  
complex as the potential carrier. Accordingly, this method requires no  
electricity and no energy input other than a concentration gradient. The  
influence of the alc. concentration and structure on the extraction  
equilibrium is studied.

Alc. acidity and stabilization of the alcoholate-quaternary ion pair are the key  
factors in determining the transfer efficiency. For example, diols are good

coextractants, probably as a result of intramol. hydrogen bonding that stabilizes the complex. The synthetic application of this concept to make CsOH, LiOH, KOH, and water-soluble tetraalkylonium hydroxides is examined. The extraction mechanism and the function of the organic membrane as a one-way transport medium and a "water pump" are discussed.

CC 68-2 (Phase Equilibriums, Chemical Equilibriums, and Solutions)

Section cross-reference(s): 78

ST hydroxide compd anion exchange prepn alc liq membrane extrn

IT Acidity

Anion exchange

Ion pairs

Membranes, nonbiological

Partition

Solvent extraction

Substituent effects

(hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT **Quaternary ammonium compounds, properties**

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT Alkali metal chlorides

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT **Alcohols, properties**

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)

(hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT Hydroxides (inorganic)

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT **Quaternary ammonium compounds, processes**

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(tri-C8-10-alkylmethyl, chlorides; hydroxide compound anion exchange preparation and alc.-liquid organic membrane extraction)

IT 56-34-8, Tetraethylammonium chloride 1310-73-2, Sodium

hydroxide (Na(OH)), processes 7447-40-7, Potassium chloride (KCl), processes 7447-41-8, Lithium chloride (LiCl), processes 7647-17-8, Cesium chloride (CsCl), processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(preparation of hydroxide compds. by anion exchange and their alc.-liquid organic membrane extraction)

IT 110-54-3, Hexane, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(preparation of hydroxide compds. by anion exchange and their alc.-liquid organic membrane extraction)

IT 76-09-5, Pinacol 111-27-3, 1-Hexanol, properties 123-96-6, 2-Octanol  
1117-86-8, 1,2-Octanediol 1119-86-4, 1,2-Decanediol 6032-29-7,  
2-Pentanol  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); PROC (Process)  
(preparation of hydroxide compds. by anion exchange and their alc  
.-liquid organic membrane extraction)

IT 77-98-5P, Tetraethylammonium **hydroxide** 1310-58-3P,  
Potassium hydroxide (K(OH)), properties 1310-65-2P, Lithium hydroxide  
(Li(OH)) 21351-79-1P, Cesium hydroxide (Cs(OH))  
RL: PEP (Physical, engineering or chemical process); PRP  
(Properties); PYP (Physical process); SPN (Synthetic  
preparation); PREP (Preparation); PROC (Process)  
(preparation of **hydroxide** compds. by anion exchange and their  
**alc.**-liquid organic membrane extraction)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:456360 HCAPLUS

DOCUMENT NUMBER: 133:137409

TITLE: Novel **synthesis** of alkali and quaternary  
onium **hydroxides** via liquid anion exchange;  
an alternative concept for the manufacture of KOH and  
other **hydroxide** salts

AUTHOR(S): Rothenberg, Gadi; Wiener, Harold; Lavie, Zohar;  
Sasson, Yoel

CORPORATE SOURCE: Casali Inst. Appl. Chem., Hebrew University of  
Jerusalem, Israel

SOURCE: Chemical Communications (Cambridge) (2000), (14),  
1293-1294

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 07 Jul 2000

AB Alcs. enhance the extraction of a basic potential through a liquid membrane in  
the presence of quaternary ammonium salts, thus enabling preparation of caustic  
solns. without direct transport of hydroxide ions. A 2-stage hydroxide  
extraction process is described under various conditions.

CC 49-3 (Industrial Inorganic Chemicals)

ST alkali quaternary onium **hydroxide synthesis** liq anion  
exchange

IT Quaternary ammonium compounds, reactions

Quaternary ammonium compounds, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(**halides**; **synthesis** of alkali and quaternary onium  
**hydroxides** via liquid anion exchange as alternative concept for  
manufacture of KOH and other **hydroxide** salts)

IT Halides

Halides

RL: RCT (Reactant); RACT (Reactant or reagent)

(**quaternary ammonium halides**;  
**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)

IT Anion exchange

(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)

- IT **Quaternary ammonium compounds, preparation**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT Alkali metal halides, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT Alkaline earth halides  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT **Alcohols, uses**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT **Quaternary ammonium compounds, uses**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(tri-C8-10-alkylmethyl, chlorides; **synthesis** of alkali and  
quaternary onium **hydroxides** via liquid anion exchange as  
alternative concept for manufacture of KOH and other **hydroxide**  
salts)
- IT **75-59-2P, Tetramethylammonium hydroxide 1310-58-3P,**  
**Potassium hydroxide, preparation 1310-65-2P, Lithium**  
**hydroxide 21351-79-1P, Cesium hydroxide**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT 1310-73-2, Sodium hydroxide, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)
- IT 111-27-3, Hexan-1-ol, uses 123-96-6, Octan-2-ol 6032-29-7, Pentan-2-ol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**synthesis** of alkali and quaternary onium **hydroxides**  
via liquid anion exchange as alternative concept for manufacture of KOH and  
other **hydroxide** salts)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:565872 HCAPLUS

DOCUMENT NUMBER: 131:181113

TITLE: **Preparation of quaternary  
ammonium wood preservatives**

INVENTOR(S): Bell, John P.; Doyle, Andress K.; Farmer, Robert F.;  
Gadberry, James F.; Lucas, Douglas; Mirviss, Stanley  
B.

PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9943212	A2	19990902	WO 1999-EP1306	19990226
WO 9943212	A3	20030417		
W: AU, NZ				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6172117	B1	20010109	US 1998-32604	19980227
AU 9930311	A1	19990915	AU 1999-30311	19990226
PRIORITY APPLN. INFO.:			US 1998-32604	A 19980227
			WO 1999-EP1306	W 19990226

OTHER SOURCE(S): MARPAT 131:181113

ED Entered STN: 08 Sep 1999

AB Biocidal preservatives for use especially in preventing rotting and deterioration of wood, include quaternary ammonium compds. which preferably have a fatty aliphatic substituent on the quaternary nitrogen atom. Especially preferred are cocoalkyl substituents. Other substituents can include alkoxy groups, arenes, and heterocyclic groups with or without ring substitutions. The quaternary ammonium compound can also contain an amine nitrogen and can be complexed with copper.

IC ICM A01N047-00

CC 5-2 (Agrochemical Bioregulators)

ST **quaternary ammonium compd prepn wood preservative**

IT **Quaternary ammonium** compounds, biological studies  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (**chlorides; preparation as wood preservatives**)

IT Biocides

Wood **preservatives**

(quaternary ammonium compds.)

IT 111-42-2DP, Diethanolamine, complex with copper complex of dialkylcocoalkyl((hydroxyethyl)amino)  
**hydroxypropylammonium** chloride 7440-50-8DP, Copper, dialkylcocoalkyl((hydroxyethyl)amino)  
**hydroxypropylammonium** chloride complex, complex with diethanolamine, biological studies 99178-63-9DP, cocoalkyl quaternized, chloride salt 240407-15-2P 240407-16-3DP, cocoalkyl quaternized, chloride salt 240407-17-4DP, dicocoalkyl quaternized, chloride salt 240407-18-5P 240407-19-6P 240407-20-9DP, cocoalkyl quaternized, chloride salt; copper complex, complex with diethanolamine 240407-30-1DP, alkyl quaternized, chloride salt 240407-31-2DP, cocoalkyl quaternized, chloride salt  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (**preparation as wood preservative**)

IT 29450-16-6D, cocoalkyl quaternized, chloride salt 62469-55-0D, cocoalkyl quaternized, chloride salt 62469-57-2D, cocoalkyl quaternized, chloride salt 91428-63-6D, cocoalkyl quaternized, chloride salt 99178-47-9D, cocoalkyl quaternized, chloride salt 100536-53-6D, cocoalkyl quaternized, chloride salt 102206-58-6D, cocoalkyl quaternized, chloride salt 240407-21-0D, cocoalkyl quaternized, chloride salt 240407-22-1D, cocoalkyl quaternized, chloride salt 240407-23-2D, cocoalkyl quaternized, chloride salt 240407-24-3D, cocoalkyl quaternized, chloride salt 240407-25-4D, cocoalkyl quaternized, chloride salt 240407-26-5D, cocoalkyl quaternized, chloride salt 240407-27-6D, cocoalkyl quaternized, chloride salt 240407-28-7D, cocoalkyl quaternized, chloride salt 240407-29-8D, cocoalkyl quaternized, chloride salt 240407-32-3D,

cocoalkyl quaternized, chloride salt 240407-33-4D, cocoalkyl quaternized, chloride salt 240407-34-5D, cocoalkyl quaternized, chloride salt 240407-35-6D, cocoalkyl quaternized, chloride salt 240407-36-7D, cocoalkyl quaternized, chloride salt 240407-37-8D, cocoalkyl quaternized, chloride salt 240407-38-9D, cocoalkyl quaternized, chloride salt 240407-39-0D, cocoalkyl quaternized, chloride salt 240407-40-3D, cocoalkyl quaternized, chloride salt 240407-41-4D, cocoalkyl quaternized, chloride salt 240407-42-5D, cocoalkyl quaternized, chloride salt 240407-43-6D, cocoalkyl quaternized, chloride salt 240407-44-7D, cocoalkyl quaternized, chloride salt 240407-45-8D, cocoalkyl quaternized, chloride salt 240407-46-9D, cocoalkyl quaternized, chloride salt 240407-47-0D, cocoalkyl quaternized, chloride salt 240407-48-1D, cocoalkyl quaternized, chloride salt 240407-49-2D, cocoalkyl quaternized, chloride salt 240407-50-5D, cocoalkyl quaternized, chloride salt

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(wood **preservative**)

L101 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:445113 HCAPLUS

DOCUMENT NUMBER: 131:228261

TITLE: Syntheses of carbonate and carbamate esters from carbon dioxide, alcohols, and **tert-amines** mediated by acetylene

AUTHOR(S): Sasaki, Yoshiyuki; Tominaga, Kenichi

CORPORATE SOURCE: Chemical Process Div., Global Warming Control Dept., NIRE, Japan

SOURCE: Shigen to Kankyo (1999), 8(2), 117-122

CODEN: SKANE7; ISSN: 0916-9997

PUBLISHER: Shigen Kankyo Gijutsu Sogo Kenkyusho

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

OTHER SOURCE(S): CASREACT 131:228261

ED Entered STN: 21 Jul 1999

AB It was found that the acetylene-mediated reaction of carbon dioxide, ethanol, and triethylamine gave di-Et carbonate, the selectivity of which reached up to 78% based on amine converted. When primary or secondary amine was used in place of alc., corresponding carbamic acid esters were formed in poor to fair yields. On the other hand, N,N-diethylaminoalkyldiethylcabamates were mainly formed together with diols in the reaction of carbon dioxide with N,N-diethylamino alcs. in the presence of acetylene. This reaction provides a new method for the fixation of carbon dioxide into useful organic compds., carbonic acid diesters and carbamic acid esters.

CC 21-2 (General Organic Chemistry)

IT 64-17-5, Ethanol, reactions 71-91-0, **Tetraethylammonium**

**bromide** 74-86-2, Acetylene, reactions 100-37-8,

2-(Diethylamino)ethanol 107-10-8, n-Propylamine, reactions 107-21-1,

1,2-Ethanediol, reactions 109-89-7, Diethylamine, reactions 121-44-8,

reactions 124-38-9, Carbon dioxide, reactions 504-63-2,

1,3-Propanediol 541-41-3, Ethyl chloroformate 622-93-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(**preparation of carbonate and carbamate esters from carbon dioxide, alcs., and tert-amines mediated by acetylene**)

L101 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:468146 HCAPLUS

DOCUMENT NUMBER: 121:68146

TITLE: Method for **preparing** organic and inorganic



INVENTOR(S): **hydroxides** and alkoxides by electrolysis  
 Bard, Allen I.; Sharifian, Hossein  
 PATENT ASSIGNEE(S): Sachem, Inc., USA  
 SOURCE: U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 983,052,  
 abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5286354	A	19940215	US 1993-45819	19930409
WO 9424335	A1	19941027	WO 1994-US3430	19940406
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9466223	A1	19941108	AU 1994-66223	19940406
EP 644955	A1	19950329	EP 1994-913975	19940406
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08500853	T2	19960130	JP 1994-523223	19940406
PRIORITY APPLN. INFO.:				
			US 1992-983052	B2 19921130
			US 1993-45819	A 19930409
			WO 1994-US3430	W 19940406

ED Entered STN: 06 Aug 1994

AB In an electrolytic process for making hydroxides or alkoxides from the corresponding halide salts in a divided cell the desired compds. are formed in the catholyte while the accumulation of halogen in the anolyte is effectively prevented by the action of a reducing agent added to the acidic anolyte.

IC ICM C25B001-00

INCL 204086000

CC 72-9 (Electrochemistry)

Section cross-reference(s): 45, 49

ST org inorg **hydroxide** alkoxide electrolytic **prodn**

IT Phosphonium compounds

RL: USES (Uses)

(**hydroxides**, quaternary, organic and inorg., electrolytic **production** of)

IT Alkaline earth compounds

RL: PREP (Preparation)

(reducing agent, in electrolytic **preparation** of inorg. **hydroxides** and alkoxides)

IT Alkali metals, uses

Transition metals, uses

RL: PREP (Preparation)

(compds., reducing agent, in electrolytic **preparation** of inorg. **hydroxides** and alkoxides)

IT Quaternary ammonium compounds, reactions

RL: PREP (Preparation)

(halides, electrolytic **preparation** of organic and inorg. **hydroxides** and alkoxides from)

IT Quaternary ammonium compounds, preparation

RL: PREP (Preparation)

(**hydroxides**, organic and inorg., electrolytic **production** of)

IT Sulfonium compounds

RL: USES (Uses)  
 (hydroxides, tertiary, organic and inorg., electrolytic production of)

IT **Alcohols, preparation**  
 RL: PREP (Preparation)  
 (metal salts, organic and inorg., electrolytic production of)

IT 7782-42-5, Graphite, uses 12645-46-4, Iridium oxide  
 RL: USES (Uses)  
 (anode, in electrolytic preparation of inorg. hydroxides and alkoxides)

IT 64-20-0, Tetramethylammonium bromide 1643-19-2, Tetrabutylammonium bromide 1941-30-6, Tetra-n-propylammonium bromide  
 RL: PRP (Properties)  
 (electrolytic preparation of corresponding hydroxides and alkoxides from)

IT **75-59-2P, Tetramethylammonium hydroxide**  
**2052-49-5P, Tetrabutylammonium hydroxide**  
**4499-86-9P, Tetra-n-propylammonium hydroxide**  
 RL: **PREP (Preparation)**  
 (electrolytic production of, from corresponding halide)

IT 127362-30-5, Tosflex IE-SF 34 156259-81-3, Neosepta AMH  
 RL: PRP (Properties)  
 (in electrolytic preparation of inorg. hydroxides and alkoxides)

IT 540-69-2, Ammonium formate 7664-41-7, Ammonia, reactions  
 RL: PRP (Properties)  
 (reducing agent, in electrolytic preparation of inorg. hydroxides and alkoxides)

L101 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:443366 HCAPLUS

DOCUMENT NUMBER: 119:43366

TITLE: Stable wood preservatives  
 containing quaternary ammonium salts, copper compounds, amines, phosphate esters, and anion-producing substances

INVENTOR(S): Nagano, Masahiro

PATENT ASSIGNEE(S): Zaiensu Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05085905	A2	19930406	JP 1991-251318	19910930
JP 3222160	B2	20011022		

PRIORITY APPLN. INFO.: JP 1991-251318 19910930

ED Entered STN: 07 Aug 1993

AB Decay-preventing and termite-controlling wood preservatives contain quaternary ammonium salts, Cu salts and/or Cu oxides, alkyldiamines, alkanolamines, polyoxyethylene alkyl (aryl) ether phosphate esters, and substances producing CO<sub>3</sub><sup>2-</sup>, HCO<sub>3</sub><sup>-</sup> or PO<sub>4</sub><sup>3-</sup>, dissolved in aqueous solvents. Didecyldimethylammonium chloride 14.6, basic Cu chloride 9.0, monoethanolamine 45.0, propanediamine 10.9, polyoxyethylene alkyl (aryl) ether monophosphate 6.0, KH<sub>2</sub>PO<sub>4</sub> 2.0, and H<sub>2</sub>O 12.5 weight% were mixed to give a wood preservative. The solution was stable at 60° for 1 mo. Wood was treated with the solution (diluted 100 times) to show 100.0% control of

termites for 28 days, vs. 25.0%, for an aqueous solution containing didecyldimethylammonium chloride itself.

IC ICM A01N033-12  
 ICI A01N033-12, A01N059-20, A01N033-08, A01N033-04, A01N057-12, A01N059-26, A01N059-08  
 CC 5-4 (Agrochemical Bioregulators)  
 Section cross-reference(s): 43  
 ST **quaternary ammonium copper wood preservative**  
 ; amine phosphate copper wood **preservative**; **carbonate quaternary ammonium wood preservative**  
 IT **Wood preservatives**  
 (**quaternary ammonium** salts- and copper compds.- and amine-containing compns., stable)  
 IT Amines, uses  
**Carbonates**, uses  
 Phosphates, uses  
 RL: BIOL (Biological study)  
 (wood **preservatives** containing, stable)  
 IT **Quaternary ammonium** compounds, compounds  
 RL: BIOL (Biological study)  
 (alkylbenzyl dimethyl, **chlorides**, wood **preservatives** containing, stable)  
 IT 100-36-7, N,N-Diethylethylenediamine 107-15-3, 1,2-Ethanediamine, uses 108-00-9, N,N-Dimethylethylenediamine 111-42-2, uses 141-43-5, Monoethanolamine, uses 144-55-8, Sodium **bicarbonate**, uses 497-19-8, **Carbonic** acid disodium salt, uses 584-08-7, Potassium **carbonate** 1317-38-0, Cupric oxide, uses 5538-94-3, Dioctyldimethylammonium chloride 7173-51-5, Didecyldimethylammonium chloride 7558-79-4 7558-80-7, Sodium dihydrogen phosphate 7664-38-2, Phosphoric acid, uses 7722-76-1, Ammonium dihydrogen phosphate 7778-77-0, Potassium dihydrogen phosphate 9056-42-2D, ethers 10103-48-7D, basic 10402-15-0, Copper citrate 12069-69-1, Basic copper **carbonate** 25322-68-3D, ethers, phosphate esters 26545-55-1, Propanediamine 30981-48-7, Copper phosphate 32426-11-2, Octyldecyldimethylammonium chloride  
 RL: BIOL (Biological study)  
 (wood **preservatives** containing, stable)

L101 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:127723 HCAPLUS

DOCUMENT NUMBER: 118:127723

TITLE: Manufacture of mesoporous, nonlayered, crystalline inorganic materials

INVENTOR(S): Degnan, Thomas F.; Johnson, Ivy D.; Keville, Kathleen M.

PATENT ASSIGNEE(S): Mobil Oil Corp., USA

SOURCE: U.S., 39 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5156828	A	19921020	US 1991-732516	19910718
PRIORITY APPLN. INFO.:			US 1991-732516	19910718

OTHER SOURCE(S): MARPAT 118:127723

ED Entered STN: 30 Mar 1993

AB The material, containing, after calcination, uniformly sized pores having

diameter  $\geq 13$  Å and having x-ray diffraction pattern containing  $\geq 1$  peaks of  $>18$  Å d-spacing and having adsorption capacity for C<sub>6</sub>H<sub>6</sub> .gtorsim.15 g C<sub>6</sub>H<sub>6</sub>/100 g at 50 Torr and 25°, are prepared by preparing a reaction mixture comprising  $\geq 1$  oxides of  $\geq 1$  of di-, tri-, tetra-, and pentavalent elements,  $\geq 1$  solvents, and an organic templating agent having general formula (R1-4)Q<sup>+</sup> (Q = N or P;  $\geq 1$  of R1-4 is C6-36-alkyl or -aryl, the balance of R1-4 being selected from H and C1-5-alkyl), maintaining the reaction mixture at a temperature and pH for a duration sufficient to form the title material containing the templating agent, recovering the material and contacting the material with steam at elevated temperature. These large-pore mol. sieves contain little templating agent, have increased acid activity, and are suitable for use as catalysts and sorbents. A mixture of 29-weight% cetyltrimethylammonium chloride solution 100, aqueous tetramethylammonium silicate solution (10 weight% SiO<sub>2</sub>) 100, HiSil (silica gel; free water content 6, bonded water content .apprx.4.5 weight%; particle size 0.02 µm) 25g was heated overnight under agitation at 95° to give a crystalline material that was dried in air, and calcined at 540° in N for 1 h and in air for 6 h to give a crystalline material having surface area 475 m<sup>2</sup>/g, and adsorption capacity for H<sub>2</sub>O 8.3, cyclohexane 22.9, hexane 18.2, and C<sub>6</sub>H<sub>6</sub> 21.5 g/100 g resp.

IC ICM C01B033-34

INCL 423709000

CC 49-4 (Industrial Inorganic Chemicals)

IT 7631-86-9P, Ludox HS-40, occurrence 77-98-5P, Tetraethylammonium hydroxide

RL: PREP (Preparation); PREP (Preparation)

(colloidal, reactions of, in nonlayered mesoporous mol. sieve manufacture, templating agents for)

IT 75-59-2, Tetramethylammonium hydroxide 123-75-1, Pyrrolidine, reactions 505-86-2 1302-42-7, Sodium aluminate (NaAlO<sub>2</sub>) 1310-73-2, Sodium hydroxide, reactions 1941-30-6, Tetrapropylammonium bromide 7664-38-2, Phosphoric acid, reactions 53116-81-7, Tetramethylammonium silicate

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactions of, in nonlayered mesoporous mol. sieve manufacture, templating agents for)

IT 67-63-0, Isopropyl alcohol, uses 108-67-8, 1,3,5-Trimethylbenzene, uses

RL: USES (Uses)

(solvent, in nonlayered mesoporous mol. sieve manufacture, templating agents for)

L101 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:58931 HCAPLUS

DOCUMENT NUMBER: 116:58931

TITLE: Electrolytic preparation of quaternary ammonium hydroxides and alkoxides

INVENTOR(S): Ochoa Gomez, Jose Ramon; Tarancon Estrada, Maria

PATENT ASSIGNEE(S): Ercros S. A., Spain

SOURCE: Span., 18 pp.  
CODEN: SPXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Spanish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ES 2019550	A6	19910616	ES 1990-1049	19900411

WO 9115615 A1 19911017 WO 1991-ES22 19910410

W: CH, DE, GB, JP, NL, SE, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE

PRIORITY APPLN. INFO.: ES 1990-1049 U 19900411

OTHER SOURCE(S): MARPAT 116:58931

ED Entered STN: 21 Feb 1992

AB Title salts R1R2R3R4N+ (OY)- [R1-R4 = straight, branched, or cyclic alkyl, (un)substituted Ph or CH2Ph; Y = H, straight or branched alkyl] are prepared by: (a) preparing an electrolysis cell with anodic and cathodic compartments separated by an anion exchange membrane, (b) introducing a solution of halide R1R2R3R4N+ X- (X = Cl, Br, I) at the cathode and a solution of either an alkali metal halide or halo acid at the anode, (c) applying a current to induce migration of halide to the anode with generation of hydroxide or alkoxide at the cathode, and (d) obtaining product solution from the cathode compartment. For example, a cell was prepared with Ru oxide/Ti anode and stainless steel cathode (both 20 cm2), separated by 0.8 cm and a Selemion AMV membrane. At the anode was circulated 10 g NaBr in 150 mL H2O, and at the cathode 10 g Bu4N+ in 90 g H2O. The cell was fed a 4-A current (2.000 A/m2) at 25° until the Br- concentration in catholyte was <0.1%. The catholyte contained 8.25% Bu4N+ OH-, with selectivity 100%, current efficiency 17%, productivity 3.22 kg/hm2, and specific energy consumption 4.83 kWh/kg. Variants of this preparation were performed, as well as preps. of Et4N+ OH-, PhCH2N+Et3 OH-, and Bu4N+ MeO-.

IC ICM C25B003-00

ICS C07C213-08

CC 25-4 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 72

ST **quaternary ammonium hydroxide alkoxide;****electrolysis quaternary ammonium halide**IT **Quaternary ammonium compounds, preparation**

RL: SPN (Synthetic preparation); PREP (Preparation)

(alkoxides, **preparation of, by electrolysis of quaternary ammonium halides in alcs.**)IT **Electrolysis**(of **quaternary ammonium halides, hydroxides and alkoxides from**)IT **Quaternary ammonium compounds, reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)

(halides, electrolysis of, **quaternary ammonium hydroxides and alkoxides from**)IT **Quaternary ammonium compounds, preparation**

RL: SPN (Synthetic preparation); PREP (Preparation)

(hydroxides, **preparation of, by electrolysis of quaternary ammonium halides**)IT **56-37-1, Benzyltriethylammonium chloride**

RL: RCT (Reactant); RACT (Reactant or reagent)

(electrolysis of, **benzyltriethylammonium hydroxide from**)IT **1643-19-2, Tetrabutylammonium bromide**

RL: RCT (Reactant); RACT (Reactant or reagent)

(electrolysis of, **tetrabutylammonium hydroxide or methoxide from**)IT **71-91-0, Tetraethylammonium bromide**

RL: RCT (Reactant); RACT (Reactant or reagent)

(electrolysis of, **tetraethylammonium hydroxide from**)IT **1836-42-6P, Benzyltriethylammonium hydroxide**

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, by electrolysis of **benzyltriethylammonium chloride**)IT **2052-49-5P, Tetrabutylammonium hydroxide**

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, by electrolysis of tetrabutylammonium bromide)  
 IT 34851-41-7P, Tetrabutylammonium methoxide  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, by electrolysis of tetrabutylammonium bromide in methanol)

IT 77-98-5P, Tetraethylammonium hydroxide  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, by electrolysis of tetraethylammonium bromide)

L101 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:535945 HCAPLUS

DOCUMENT NUMBER: 105:135945

TITLE: Purifying (3-chloro-2-hydroxypropyl)trialkylammonium chloride

INVENTOR(S): Tasset, Emmett L.

PATENT ASSIGNEE(S): Dow Chemical Co., USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4602110	A	19860722	US 1985-734311	19850515
CA 1255702	A1	19890613	CA 1986-514037	19860717
WO 8800582	A1	19880128	WO 1986-US1500	19860721
W: BR, FI, JP, NO				
RW: BE, DE, FR, GB, IT, NL, SE				
JP 63501713	T2	19880714	JP 1986-504087	19860721
JP 02027336	B4	19900615		
EP 276207	A1	19880803	EP 1986-904695	19860721
EP 276207	B1	19910918		
R: BE, DE, FR, GB, IT, NL, SE				
BR 8607185	A	19880913	BR 1986-7185	19860721
FI 8801218	A	19880315	FI 1988-1218	19880315
NO 8801201	A	19880318	NO 1988-1201	19880318
PRIORITY APPLN. INFO.:			US 1985-734311	19850515
			WO 1986-US1500	W 19860721

OTHER SOURCE(S): CASREACT 105:135945

ED Entered STN: 18 Oct 1986

AB In the title purification, an aqueous slurry containing 70-98% ammonium compound prepared

from epichlorohydrin (I) and a trialkylamine hydrochloride is mixed with water-miscible C3-4 alc. to give a precipitate comprising the purified product and liquid containing dissolved impurities. The purified product is useful in the manufacture of cationically active starch. Thus, a slurry containing 90% solids comprising 84.0% ClCH<sub>2</sub>CH(OH)CH<sub>2</sub>NMe<sub>3</sub>Cl (II; prepared from I and Me<sub>3</sub>N.HCl) was mixed with iso-PrOH to give a composition containing 27% iso-PrOH.

The precipitate was collected to give II of 99.0% purity.

IC ICM C07C089-04

INCL 564292000

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 23, 44

ST chlorohydroxypropyltrialkylammonium chloride **prepn** purifn;  
 ammonium chlorohydroxypropyltrialkylchloride **prepn** purifn;  
 hydroxychloropropyltrialkylammonium chloride **prepn**  
 purifn; epichlorohydrin trialkylamine **product** purifn; amine

trialkyl epichlorohydrin **product** purifn; isopropanol purifn  
chlorohydroxypropyltrialkylammonium chloride

IT **Quaternary ammonium compounds, preparation**

RL: IMF (Industrial manufacture); PREP (Preparation)  
(trialkyl(chlorohydroxypropyl), chlorides, **preparation**  
of, purification by extraction with aqueous alc. in)

IT 3327-22-8P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(**preparation** of, purification by extraction with aqueous alc. in)

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L101 ANSWER 18 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2003-621559 [59] WPIX  
DOC. NO. NON-CPI: N2003-495129  
DOC. NO. CPI: C2003-170123  
TITLE: Manufacture of perhydrate solution of quaternary ammonium  
salt for semiconductor manufacture, involves adding acid  
and/or its salt having oxidation-reduction property to  
solution of quaternary ammonium salt.  
DERWENT CLASS: E19 G06 L03 P84 U11  
PATENT ASSIGNEE(S): (TOYJ) TOSOH CORP  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 2003146946	A	20030521	(200359)*		4	C07C209-68<--	

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2003146946	A	JP 2001-341935	20011107

PRIORITY APPLN. INFO: JP 2001-341935 20011107  
INT. PATENT CLASSIF.:

MAIN: C07C209-68

SECONDARY: C07C211-63; G03F007-42; H01L021-027

#### BASIC ABSTRACT:

JP2003146946 A UPAB: 20030915

NOVELTY - The manufacture of perhydrate solution of quaternary ammonium salt involves adding an acid and/or its salt having oxidation reduction property into a perhydrate solution of a quaternary ammonium salt.

USE - For use in semiconductor manufacture, as stripper of titanium oxide.

ADVANTAGE - The method of forming quaternary ammonium salt solution effectively adjusts its pH without degrading the properties of the solution.

Dwg.0/0

FILE SEGMENT: CPI EPI GMPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: E05-S; E10-A04B1C; E10-A04B2C; **E10-A22A;**  
**E10-A22E; E10-A22G;** E10-C02;  
E10-C04; E31-E; E31-F05; E31-H05; E31-K07; G06-D06;  
L04-X

EPI: U11-A10

TECH UPTX: 20030915

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Ammonium Salt: The cation of the quaternary ammonium salt is tetraalkyl ammonium, trialkyl benzyl ammonium and/or hydroalkyl trialkyl ammonium. The anion of the ammonium salt is carbonate, carboxylate and/or hydroxide ion.

Preferred Acid: The acid is an inorganic acid, organic peroxyacid and/or organic acid. The organic peroxyacid is perbenzoic acid and/or peracetic acid. The organic acid is ascorbic acid, oxalic acid and/or citric acid.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Acid: The inorganic acid is nitrous, sulfurous, sulfuric, persulfuric, phosphorous, hypophosphorous and/or perboric acid.

L101 ANSWER 19 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-547367 [52] WPIX  
 DOC. NO. NON-CPI: N2003-434695  
 DOC. NO. CPI: C2003-148707  
 TITLE: Manufacture of perhydrate of quaternary ammonium salt used as photoresist separating agent, comprises contacting quaternary ammonium salt and hydrogen peroxide in presence of aromatic carboxylic acid.  
 DERWENT CLASS: E19 G06 L03 U11  
 PATENT ASSIGNEE(S): (TOYJ) TOSOH CORP  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 2003137846	A	20030514	(200352)*		4	C07C209-68	--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2003137846	A	JP 2001-336421	20011101

PRIORITY APPLN. INFO: JP 2001-336421 20011101  
 INT. PATENT CLASSIF.:

MAIN: C07C209-68  
 SECONDARY: C07C211-63; C07C211-65  
 ADDITIONAL: C07B061-00

## BASIC ABSTRACT:

JP2003137846 A UPAB: 20030813

NOVELTY - The manufacture of perhydrate of quaternary ammonium salt involves contacting quaternary ammonium salt and hydrogen peroxide in the presence of an aromatic carboxylic acid.

USE - To manufacture perhydrate of quaternary ammonium salt, used as photoresist separating agent and titanium oxide separating agent in the manufacture of printed wiring board and for circuit formation such as semiconductor and liquid crystal.

ADVANTAGE - Perhydrate of quaternary ammonium salt is stable, easy to handle and does not decompose easily when contacted with platinum. The formation speed of perhydrate is greatly increased due to the presence of aromatic carboxylic acid. The perhydrate of quaternary ammonium salt is produced inexpensively as water is used as the solvent, and both hydrogen peroxide and quaternary ammonium salt are available as aqueous solutions.

Dwg. 0/0

FILE SEGMENT: CPI EPI  
 FIELD AVAILABILITY: AB; DCN



MANUAL CODES: CPI: E05-S; **E10-A22**; E31-E; G06-D04; G06-G;  
L03-H04E2; L04-C06B  
EPI: U11-A06; U11-A09

TECH UPTX: 20030813

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Substances: The aromatic carboxylic acid is benzoic acid, salicylic acid and/or phthalic acid. The anion which forms quaternary ammonium salt is chosen from carbonate ion, carboxylic acid ion and/or hydroxide ion. The cation which forms quaternary ammonium salt is tetralkyl ammonium ion, trialkylbenzyl **ammonium** ion and/or **hydroxy** alkyl trialkyl **ammonium** ion.

L101 ANSWER 20 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2003-814121 [77] WPIX  
DOC. NO. CPI: C2003-226612  
TITLE: Method for preparing quaternary **ammonium**  
**hydroxide** by using quaternary **ammonium**  
salt.  
DERWENT CLASS: A97 E16  
INVENTOR(S): HAO, Y; KE, L; ZHANG, M  
PATENT ASSIGNEE(S): (CHPE-N) CHINA PETRO-CHEM CORP  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
CN 1428330	A	20030709	(200377)*				C07C211-63<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1428330	A	CN 2001-143458	20011228

PRIORITY APPLN. INFO: CN 2001-143458 20011228  
INT. PATENT CLASSIF.:

MAIN: **C07C211-63**  
SECONDARY: **C07C209-68**

BASIC ABSTRACT:

CN 1428330 A UPAB: 20031128

NOVELTY - Preparing quaternary ammonium base by: using alkyl alcohol base quaternary ammonium compound solution to treat Y(-) type strong base anion-exchange resin to convert it into base radical RO(-) ion type, then using obtained resin to treat the quaternary ammonium salt dissolved in the solvent to obtain an alkyl alcohol base quaternary ammonium compound, adding water in the solution to obtain a quaternary ammonium base solution.

DETAILED DESCRIPTION - Preparing quaternary ammonium base by using quaternary ammonium salt includes: using alkyl alcohol base quaternary ammonium compound solution to treat Y(-) type strong base anion-exchange resin to convert it into base radical RO(-) ion type, then using obtained resin to treat the quaternary ammonium salt dissolved in the solvent to obtain the correspondent alkyl alcohol base quaternary ammonium compound, finally, adding proper quantity of water in the above quaternary ammonium compound solution so as to obtain the correspondent quaternary ammonium base solution.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB

MANUAL CODES: CPI: A12-M; E10-A22

L101 ANSWER 21 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2001-458147 [50] WPIX  
 DOC. NO. NON-CPI: N2001-339550  
 DOC. NO. CPI: C2001-138673  
 TITLE: Production of **tetramethylammonium hydroxide**, used in products for electronics industry for development, leveling or etching photoresists, involves continuous electrolysis under stationary conditions in membrane cell.  
 DERWENT CLASS: E16 G06 J03 L03 X25  
 INVENTOR(S): ANDOLFATTO, F  
 PATENT ASSIGNEE(S): (AQOR) ATOFINA; (AQOR) ELF ATOCHEM SA; (ANDO-I) ANDOLFATTO F  
 COUNTRY COUNT: 7  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
DE 10101494	A1	20010719	(200150)*		11	C25B003-00	
FR 2803856	A1	20010720	(200150)			C25B003-00	
GB 2358195	A	20010718	(200150)			C25B003-00	
US 2001025798	A1	20011004	(200161)			C25B003-00	
JP 2001271193	A	20011002	(200172)		35	C25B003-02	
CN 1312400	A	20010912	(200202)			C25B003-00	
KR 2001086305	A	20010910	(200219)			C25B003-00	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10101494	A1	DE 2001-10101494	20010112
FR 2803856	A1	FR 2000-390	20000113
GB 2358195	A	GB 2001-628	20010110
US 2001025798	A1	US 2001-758150	20010112
JP 2001271193	A	JP 2001-1052	20010109
CN 1312400	A	CN 2001-104629	20010113
KR 2001086305	A	KR 2001-1280	20010110

PRIORITY APPLN. INFO: FR 2000-390 20000113

## INT. PATENT CLASSIF.:

MAIN: C25B003-00; C25B003-02  
 SECONDARY: C07C209-68; C07C211-63; C25B009-00;  
 C25B009-18; C25B011-04; C25B013-08; C25B015-08

## BASIC ABSTRACT:

DE 10101494 A UPAB: 20010905

NOVELTY - Production of **tetramethylammonium hydroxide** (TMAH) by electrolysis of a tetramethylammonium salt in a cell with cation exchange membrane is carried out continuously under stationary conditions by:

- (a) feeding an ammonium salt solution with a higher concentration than that in the cell into the anode cycle and feeding water into the cathode cycle; and
- (b) discharging part of each solution circulating in the anode and cathode cycles.

USE - **Tetramethylammonium hydroxide** is a constituents of the products used most in the electronics industry (development, leveling and etching of photoresists).

**ADVANTAGE** - Electrolysis is normally carried out discontinuously, using a concentrated salt solution in the anode cycle and deionized water containing 0.1-1% **tetramethylammonium hydroxide (TMAH)** in the cathode cycle. However, this causes a large potential difference and significant temperature rise, whilst the increases in TMAH and salt concentrations reduce the membrane life and the yield and quality of the TMAH produced. Continuous operation under stationary conditions, with a stable current density and constant potential difference, ensures optimum membrane function and hence better capacity, increases the membrane life and ensures that TMAH of constant quality is produced. The energy consumption is minimized to e.g. about 3000 kWh/tonne TMAH at 3 kA/m<sup>2</sup>, compared with 4700 kWh/tonne TMAH at 2 kA/m<sup>2</sup> in the best existing process.

**DESCRIPTION OF DRAWING(S)** - The drawing shows suitable apparatus.

Anode compartment 1

Cathode compartment 2

Cation exchange membrane m

Anode degassing vessel 3

Cathode degassing vessel 4

Reservoir for concentrated tetramethylammonium salt solution fed into anode cycle 5

Reservoir for deionized water fed into cathode cycle 6

Receiver for part of salt solution from anode degassing vessel 7

Storage vessel for **tetramethylammonium hydroxide**

solution 8

Dwg.1/6

FILE SEGMENT: CPI EPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: **E10-A22G**; G06-D06; G06-G; J03-B;

L03-H04E2; L04-C06B

EPI: X25-R06

TECH UPTX: 20010905

**TECHNOLOGY FOCUS - CHEMICAL ENGINEERING** - Preferred Process: A hydrogen-generating cathode, preferably of stainless steel or nickel, or an oxygen-reducing cathode, preferably based on platinized or silver-plated carbon, is used. The anode is based on platinum or an oxide of ruthenium, iridium or platinum. The cell operates at a current density of 1-5, preferably 3-4 kA/m<sup>2</sup> and between room temperature and 80degreesC, preferably at 40-60degreesC. The TMAH concentration in the cathode compartment is 5-40, preferably 10-25 wt.%, whilst the concentration of the tetraammonium salt in the anode compartment is 15-40, preferably 20-35 wt.%. Hydrogen, nitrogen and/or argon are used to provide inert conditions in the cathode compartment and for storing TMAH.

**TECHNOLOGY FOCUS - ORGANIC CHEMISTRY** - Preferred Salts: The tetramethylammonium salt is the chloride, hydrogen carbonate or hydrogen sulfate.

**TECHNOLOGY FOCUS - POLYMERS** - Preferred Membrane: The cation exchange membrane consists of not less than 2 layers of polymers with perfluorinated and/or perfluorocarboxylated chains.

ABEX UPTX: 20010905

**SPECIFIC COMPOUNDS** - Specific examples of the tetramethylammonium salt are **tetramethylammonium chloride, hydrogen carbonate** and hydrogen sulfate.

**EXAMPLE** - The electrochemical cell had an anode of ruthenium oxide-titanium oxide (RuO<sub>2</sub>-TiO<sub>2</sub>) on titanium, a perforated stainless steel plate cathode and a membrane of Nation N324 (RTM; laminate of polymer with perfluorosulfonated chain), which was conditioned by immersion in 10% **tetramethylammonium hydroxide (TMAH)** solution for 24

hours. The anode and cathode cycles were symmetrical and each had a degassing column. The anode cycle was filled with 735 g aqueous solution of 243 g/l **tetramethylammonium hydrogen carbonate** (TMA-HCO<sub>3</sub>) and the cathode cycle with 780 g aqueous solution of 237 g/l TMAH. The entire array was heated in a heating bath and argon was passed into the cathode cycle. When the temperature reached 50degreesC, the electricity supply was switched on and the current was increased by 1 A every 3 minutes until it reached 15 A, corresponding to 3 kA/m<sup>2</sup>. 100 g/hour water and 125 g/hour solution of 588 g/l TMA-HCO<sub>3</sub> were added. After 16 hours under these conditions, the TMAH concentration was 244 g/l in the storage vessel and 235 g/l in the degassing column of the cathode cycle; the TMA-HCO<sub>3</sub> concentration was 247 g/l in the reservoir and 260 g/l in the anode degassing column; the current yield was 94% for the cathode reaction and 97% for the anode reaction. The cell potential was stable at 10 V at 3 kA/m<sup>2</sup>, corresponding to an energy consumption of 3138 kWh/tonne TMAH.

L101 ANSWER 22 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-413697 [36] WPIX  
 DOC. NO. CPI: C2000-125447  
 TITLE: Production of oniumhydroxide compounds is carried out by electrodialysis of an onium salt in a cell containing a bipolar membrane and an anion exchange membrane..  
 DERWENT CLASS: E19 G06 J01 J03  
 INVENTOR(S): BOTZEM, J; FREDE, M; KOBER, R  
 PATENT ASSIGNEE(S): (BADI) BASF AG  
 COUNTRY COUNT: 91  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
DE 19856376	A1	20000608	(200036)*		7	B01D061-44	
WO 2000034224	A1	20000615	(200036)	GE		C07C209-68<--	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW							
AU 2000019706	A	20000626	(200045)			C07C209-68<--	
EP 1137625	A1	20011004	(200158)	GE		C07C209-68<--	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE							
BR 9915996	A	20010904	(200160)			C07C209-68<--	
KR 2001082325	A	20010829	(200215)			C07C209-68<--	
CN 1334796	A	20020206	(200231)			C07C209-68<--	
MX 2001005629	A1	20010801	(200238)			C07C209-68<--	
JP 2002531265	W	20020924	(200278)		27	B01D061-46	
US 6527932	B1	20030304	(200320)			B01D061-44	
EP 1137625	B1	20031001	(200365)	GE		C07C209-68<--	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE							
DE 59907231	G	20031106	(200374)			C07C209-68<--	
ES 2211210	T3	20040701	(200444)			C07C209-68<--	
AU 770841	B2	20040304	(200453)			C07C209-68<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19856376	A1	DE 1998-1056376	19981207
WO 2000034224	A1	WO 1999-EP9515	19991206

AU 2000019706	A	AU 2000-19706	19991206
EP 1137625	A1	EP 1999-963393	19991206
		WO 1999-EP9515	19991206
BR 9915996	A	BR 1999-15996	19991206
		WO 1999-EP9515	19991206
KR 2001082325	A	KR 2001-707015	20010605
CN 1334796	A	CN 1999-815988	19991206
MX 2001005629	A1	MX 2001-5629	20010605
JP 2002531265	W	WO 1999-EP9515	19991206
		JP 2000-586674	19991206
US 6527932	B1	WO 1999-EP9515	19991206
EP 1137625	B1	US 2001-856461	20010607
		EP 1999-963393	19991206
DE 59907231	G	WO 1999-EP9515	19991206
		DE 1999-507231	19991206
		EP 1999-963393	19991206
ES 2211210	T3	WO 1999-EP9515	19991206
AU 770841	B2	EP 1999-963393	19991206
		AU 2000-19706	19991206

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000019706	A Based on	WO 2000034224
EP 1137625	A1 Based on	WO 2000034224
BR 9915996	A Based on	WO 2000034224
JP 2002531265	W Based on	WO 2000034224
US 6527932	B1 Based on	WO 2000034224
EP 1137625	B1 Based on	WO 2000034224
DE 59907231	G Based on	EP 1137625
	Based on	WO 2000034224
ES 2211210	T3 Based on	EP 1137625
AU 770841	B2 Previous Publ.	AU 2000019706
	Based on	WO 2000034224

PRIORITY APPLN. INFO: DE 1998-19856376 19981207

INT. PATENT CLASSIF.:

MAIN: B01D061-44; B01D061-46; **C07C209-68**SECONDARY: C02F001-469; C07C209-84; **C07C211-63**; C25B003-00

## BASIC ABSTRACT:

DE 19856376 A UPAB: 20000801

NOVELTY - Production of oniumhydroxide compounds is carried out by electrodialysis of an onium salt in a cell containing a bipolar membrane and an anion exchange membrane.

DETAILED DESCRIPTION - A process for the production of onium hydroxide compounds (I) of N, S or P comprises electrodialysis, in a device (II) containing an anode, cathode as well as at least one cell unit with acid and base recirculation loops, of an onium salt of formula (1) contained in the base recycle loop. Each cell unit consists of a bipolar membrane and has a bipolar membrane or a cation selective membrane on the anode side between the last onium selective membrane and the anode.

An INDEPENDENT CLAIM is included a process for the purification of (I) in a device (II) by electrodialysis of solution of (I) to remove impurities dissociable in water.

M = N, S or P;

R1-R4 = 1-30C hydrocarbon, optionally substituted or two of R1-R4 may form a heterocyclic ring with M;

X = an anion;

n = 1-4

USE - The process is useful for the production or purification of onium hydroxide compounds.

ADVANTAGE - The onium hydroxide compounds are prepared in high purity. The process is simple with long life times for the anode and cathode materials.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic of an electrodialysis cell.

bipolar membrane 1  
cathode 2  
anode 3  
anion exchange membrane 4  
catholyte 9  
anolyte 10  
cation exchange membrane 11,12  
Dwg.2/2

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: E05-G03C; E05-T; E10-A01; **E10-A22G**;  
E11-Q01; G06-D06; G06-G; G06-H19; J01-C03; J03-D

TECH UPTX: 20000801

TECHNOLOGY FOCUS - CHEMICAL ENGINEERING - Preferred Process:R1-R4=1-4C aliphatic groups, X is a Bronsted acid anion, preferably F, Cl, Br, I, SO<sub>4</sub>, R<sub>5</sub>SO<sub>4</sub>, HSO<sub>4</sub>, CO<sub>3</sub>, HCO<sub>3</sub>, R<sub>5</sub>CO<sub>3</sub> and/or R<sub>5</sub>CO<sub>2</sub> where R<sub>5</sub> is a 1-30C hydrocarbon and M is N. The cathode is separated from the first cell unit on the cathode side by a cation selective membrane and the anode is separated from the first cell unit on the anode side by a cation exchange membrane. The onium salt is dissolved in a protic solvent or a mixture of protic solvents, preferably a mixture of water and at least one water soluble, OH group containing compound.

ABEX UPTX: 20000801

EXAMPLE - An electrodialysis cell comprising a ruthenium mixed oxide anode, steel cathode and 5 cell units containing a polysulfone bipolar membrane, anion exchange membrane and cation exchange membrane was used for the electrodialysis of a base recycle loop containing 10 weight% tetrapropylammonium bromide solution. The acidic recycle loop contained 0.6% HBr solution (conductivity of 100 mS) and the anolyte and catholyte streams were 5% sulfuric acid solution. Electrodialysis was carried out at 40 degreesC and 8 A/dm<sup>2</sup> to yield an 8.74 % **tetrapropylammonium hydroxide** solution (residual bromide content of 27 ppm, residual Na<sup>+</sup> and K<sup>+</sup> content of no more than 1 ppm).

L101 ANSWER 23 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-058162 [05] WPIX

DOC. NO. CPI: C2000-016105

TITLE: Production of quaternary alkyl ammonium  
tetrafluoroborates - comprises reacting quaternary alkyl  
**ammonium hydrogen carbonate**  
with borofluoric acid.

DERWENT CLASS: E12 L03

PATENT ASSIGNEE(S): (MITA) MITSUI CHEM INC

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 11315055	A	19991116	(200005)*		6	C07C211-63<--	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9803466	A1	WO 1997-JP2505	19970718
EP 860425	A1	EP 1997-930843	19970718
		WO 1997-JP2505	19970718
JP 10506794	X	WO 1997-JP2505	19970718
		JP 1998-506794	19970718
US 5929280	A	WO 1997-JP2505	19970718
		US 1998-43564	19980323
EP 860425	B1	EP 1997-930843	19970718
		WO 1997-JP2505	19970718
DE 69703428	E	DE 1997-603428	19970718
		EP 1997-930843	19970718
		WO 1997-JP2505	19970718
KR 2000064258	A	WO 1997-JP2505	19970718
		KR 1998-702076	19980320
TW 432029	A	TW 1997-110474	19970723
JP 3290183	B2	WO 1997-JP2505	19970718
		JP 1998-506794	19970718
KR 386932	B	WO 1997-JP2505	19970718
		KR 1998-702076	19980320

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 860425	A1 Based on	WO 9803466
JP 10506794	X Based on	WO 9803466
US 5929280	A Based on	WO 9803466
EP 860425	B1 Based on	WO 9803466
DE 69703428	E Based on	EP 860425
	Based on	WO 9803466
KR 2000064258	A Based on	WO 9803466
JP 3290183	B2 Based on	WO 9803466
KR 386932	B Previous Publ.	KR 2000064258
	Based on	WO 9803466

PRIORITY APPLN. INFO: JP 1996-202052 19960731; JP  
1996-193601 19960723

## INT. PATENT CLASSIF.:

MAIN: C07C209-00; C07C209-12; C07C211-63

SECONDARY: C07C209-68; C07C209-84

## BASIC ABSTRACT:

WO 9803466 A UPAB: 19980316

The production of a high-purity **tetraalkylammonium hydroxide** aqueous solution comprises electro-decomposition and electrodialysis of a tetraalkylammonium chloride aqueous solution obtainable from the reaction of trialkylamine and alkyl chloride with contents of metal-ion impurities of not more than 500 ppb, in ultra-pure water.

USE - The **ammonium hydroxide** solutions may be used as chemical reagents for chemical reactions in the form of strong bases. They may also be applied as treatment agents in washing semiconductor substrates and for etching and resist development in semiconductors during manufacturing integrated circuits and large-scale integrated circuits.

ADVANTAGE - The process is simple and direct but of very high-yielding. The **ammonium hydroxide** solutions thus



made are highly pure and substantially free from metal ions. There is no need for evaporation to dryness.

Dwg.1/1

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB; GI; DCN  
MANUAL CODES: CPI: **E10-A22G**; L04-C06; L04-C09

L101 ANSWER 25 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2002-683209 [74] WPIX  
DOC. NO. CPI: C2002-192918  
TITLE: Process for synthesizing 3-chloro-2-**hydroxypropyl**  
-trimethyl **ammonium** chloride.  
DERWENT CLASS: A11 E16  
INVENTOR(S): JIAN, X; YANG, J; ZHANG, Y  
PATENT ASSIGNEE(S): (SINO-N) SINOPEC QILU PETROCHEM CO  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
CN 1187484	A	19980715	(200274)*				C07C215-40
CN 1067982	C	20010704	(200504)				C07C215-40

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1187484	A	CN 1997-105619	19970107
CN 1067982	C	CN 1997-105619	19970107

PRIORITY APPLN. INFO: CN 1997-105619 19970107

INT. PATENT CLASSIF.:

MAIN: C07C215-40

SECONDARY: **C07C209-68**; C07C213-04

BASIC ABSTRACT:

CN 1187484 A UPAB: 20021118

NOVELTY - A process for synthesizing 3-chloro-2-**hydroxypropyl** trimethyl **ammonium** chloride used to directly prepare cationic starch features that epoxy chloropropane, aqueous solution of trimethylamine and hydrochloric acid are used as raw materials, water is used as reaction medium.

DETAILED DESCRIPTION - A process for synthesizing 3-chloro-2-**hydroxypropyl** trimethyl **ammonium** chloride used to directly prepare cationic starch features that epoxy chloropropane, aqueous solution of trimethylamine and hydrochloric acid are used as raw materials, water is used as reaction medium, quaternary ammonium salt RNR1R2R3X is used as catalyst, where R is X-CH2-CH(OH)-CH2-, HOCH2CH2-, C6H6CH2- and C4-18 alkyl, R1,R2, R3 is C1-4 alkyl or phenyl, and X is Br or Cl, and reaction takes place at 5-40 deg. C and 6.5-9.5 of pH value for 1.5-4. 5 hrs. The product has output rate of 97% and purity of 97%. Its advantages are simple apparatus, gentle condition, and low consumption of energy.

Dwg.0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB  
MANUAL CODES: CPI: A03-A; A10-E21A; **E10-A22E**; N05-D

L101 ANSWER 26 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1998-000958 [01] WPIX

DOC. NO. CPI: C1998-000473  
 TITLE: Short-chain alkyl quat. **ammonium hydroxide** preparation in high purity - involves reacting metal hydroxide with long-chain alkyl quat. ammonium salt and reacting resultant hydroxide with short-chain alkyl quat. ammonium salt.  
 DERWENT CLASS: E16 E19 E33 J04  
 INVENTOR(S): DAVE, C G  
 PATENT ASSIGNEE(S): (SCHU-N) SCHUETZ & CO GMBH & CO; (SCHU-N) SCHUETZ DISHMAN BIOTECH PVT LTD  
 COUNTRY COUNT: 79  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
DE 19644997	C1	19971204	(199801)*		4	C07C211-63<--	
WO 9818752	A1	19980507	(199824)	GE		C07C209-68<--	
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW							
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW							
AU 9853064	A	19980522	(199840)			C07C209-68<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19644997	C1	DE 1996-1044997	19961030
WO 9818752	A1	WO 1997-DE2553	19971030
AU 9853064	A	AU 1998-53064	19971030

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9853064	A Based on	WO 9818752

PRIORITY APPLN. INFO: DE 1996-19644997 19961030

## INT. PATENT CLASSIF.:

MAIN: C07C209-68; C07C211-63  
 SECONDARY: B01J027-24; B01J031-02; B01J047-06; C01B039-04;  
 C07C209-82

## BASIC ABSTRACT:

DE 19644997 C UPAB: 19981021  
 Preparation of highly pure, short-chain alkylated quaternary **ammonium hydroxides** (I) comprises converting long-chain alkylated quaternary ammonium salts (IIA) to the corresponding hydroxides (IIB) by reaction with metal hydroxides (III) and then converting (IIB) to (I) with short-chain alkylated quaternary ammonium salts (IV).

USE - (I) are used in the production of zeolites and as phase transfer catalysts (all claimed).

ADVANTAGE - Other methods of preparing (I) are relatively costly, making them unsuitable for large scale production. In particular, the recovery of (IIA) is difficult and (I) is contaminated by alkali hydroxide. The present method gives very pure (I), free from significant amount of alkali salts, as required in zeolite production.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: E31-P02A; J04-E04

L101 ANSWER 27 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1994-242005 [30] WPIX

DOC. NO. NON-CPI: N1994-190954

DOC. NO. CPI: C1994-110540

TITLE: Preparation of high purity aqueous quat. **ammonium hydroxide** solution - by reacting quat. ammonium organic acid salt with hydrogen peroxide, oxygen or an oxygen -containing gas in presence of platinum gp. metal catalyst, etc..

DERWENT CLASS: E19 J03 L03 U11

INVENTOR(S): AOYAMA, T; KONDO, T; MIYAKE, M; SUGAWARA, Y

PATENT ASSIGNEE(S): (MITN) MITSUBISHI GAS CHEM CO INC

COUNTRY COUNT: 6

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 608545	A1	19940803	(199430)*	EN	9	C25B003-00
R: DE FR GB						
JP 06192867	A	19940712	(199432)		4	C25B003-00
JP 06329602	A	19941129	(199507)		4	C07C211-63<--
US 5393386	A	19950228	(199514)		7	C25B003-02
EP 608545	B1	19970416	(199720)	EN	10	C25B003-00
R: DE FR GB						
DE 69309885	E	19970522	(199726)			C25B003-00
KR 242979	B1	20000201	(200118)			C25B003-00
JP 3277956	B2	20020422	(200234)		4	C25B003-00
JP 3424687	B2	20030707	(200351)		4	C07C209-68<--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 608545	A1	EP 1993-120484	19931218
JP 06192867	A	JP 1992-348756	19921228
JP 06329602	A	JP 1993-120173	19930521
US 5393386	A	US 1993-168049	19931215
EP 608545	B1	EP 1993-120484	19931218
DE 69309885	E	DE 1993-609885	19931218
		EP 1993-120484	19931218
KR 242979	B1	KR 1993-29846	19931227
JP 3277956	B2	JP 1992-348756	19921228
JP 3424687	B2	JP 1993-120173	19930521

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69309885	E Based on	EP 608545
JP 3277956	B2 Previous Publ.	JP 06192867
JP 3424687	B2 Previous Publ.	JP 06329602

PRIORITY APPLN. INFO: JP 1993-120173 19930521; JP 1992-348756 19921228

REFERENCE PATENTS: 01Jnl.Ref; EP 255756; EP 269949; JP 60165469; US 4572769; US 4634509; 1.Jnl.Ref

INT. PATENT CLASSIF.:

MAIN: C07C209-68; C07C211-63; C25B003-00;  
C25B003-02

SECONDARY: B01J023-40

ADDITIONAL: C07B061-00

BASIC ABSTRACT:

EP 608545 A UPAB: 20030630

Preparation comprises: (a) reacting an aqueous solution of a quaternary ammonium

organic acid salt of formula (I) with hydrogen peroxide, oxygen or an oxygen-containing gas (II) in the presence of a platinum gp. metal catalyst; and (b) electrolyzing the resulting aqueous solution of quat. ammonium

inorganic

acid salt (III). In (I), R1-R4 = 1-3C alkyl; and X = organic acid radical.

(I) is pref. tetramethylammonium formate or tetraethylammonium formate. Molar ratio of (I):(II) is pref. 0.5-100, more pref. 1-20. Concentrate of (III) is pref. 1-60 weight%. Reaction temperature during (a) is pref. 10-200 deg.C. Catalyst is pref. palladium, platinum, ruthenium, rhodium or iridium, pref. 0.01-20 weight% supported on a carrier. Carrier is active carbon, carbon fibre, active carbon fibre, silica, alumina, silica-alumina or zeolite.

USE/ADVANTAGE - Used for preparation of high purity aqueous quat. ammonium hydroxide solution, useful as a developing agent for resists in the manufacture of LSI's and LCD's and as a washing agent for semiconductor substrates.

Dwg.0/0

FILE SEGMENT: CPI EPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: E10-A22G; J03-B; J04-E01; L04-C06B;  
L04-C09; N02-F02

EPI: U11-A11

ABEQ US 5393386 A UPAB: 19950412

Aq. quat ammonium hydroxide soln. is prepd. by (a) reacting (i) an aq. soln. of quat ammonium organic acid salt of formula (I), with (ii) H2O2, O2 or O2-contg. gas, and (iii) a platinum gp. metal catalyst; then (b) electrolyzing the soln. obtd.

R1-4 are each (1-3C)alkyl; and X is an organic acid gp. Mol. (i):(ii) is 0.5-100. Cpd. (iii) is palladium, platinum, ruthenium, rhodium or iridium, supported on active carbon, carbon fibres, silica, alumina or silica-alumina.

USE - In mfr. of high purity LSIs, LCDs or as washing agent for semiconductor substrates.

Dwg.0/0

ABEQ EP 608545 B UPAB: 19970516

A method for preparing an aqueous quaternary ammonium hydroxide solution which comprises the steps of reacting an aqueous solution of a quaternary ammonium organic acid salt represented by the formula (R1R2R3R4N)+ X-, wherein each of R1 to R4 is an alkyl group having 1 to 3 carbon atoms, and they may be mutually identical or different; and X is an organic acid radical, with hydrogen peroxide, oxygen or an oxygen-containing gas in the presence of a platinum group metal catalyst to obtain a quaternary ammonium inorganic acid salt, and then electrolyzing the aqueous solution of the quaternary ammonium inorganic acid salt.

Dwg.0/0

L101 ANSWER 28 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1992-354381 [43] WPIX

DOC. NO. CPI: C1992-157380

TITLE: New cationic surfactants used in shampoos - prepared by reacting aliphatic prim. amine with cation donor e.g.

quat. ammonium salt, has mild action to skin.  
 DERWENT CLASS: D21 E16  
 PATENT ASSIGNEE(S): (KAOS) KAO CORP  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 04257548	A	19920911	(199243)*		6	C07C211-63<--	
JP 2883453	B2	19990419	(199921)		6	C07C211-63<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 04257548	A	JP 1991-19889	19910213
JP 2883453	B2	JP 1991-19889	19910213

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 2883453	B2 Previous Publ.	JP 04257548

PRIORITY APPLN. INFO: JP 1991-19889 19910213

## INT. PATENT CLASSIF.:

MAIN: C07C211-63  
 SECONDARY: A61K007-08; B01F017-18; C07C209-68; C07C209-74;  
 C07C213-00; C07C215-18; C07C305-06; C11D001-62

## BASIC ABSTRACT:

JP 04257548 A UPAB: 19931115

A cationic cpd. of formula (I) is new. In (I), each R1-2 = opt. branched 8-22C alkyl or akenyl, each R3-4 = 1-3C alkyl, Y = H or hydroxy, A = OH, halogen or 1-4C alkylsulphate, n = 0-5, when n = 1, Y = H or hydroxy and, when n = 0, 2, 3, 4 or 5, Y = H.

The pH of a mixture of 185g laurylamine and 185g ethanol at 70-80 deg.C under stirring is adjusted with 40% NaOH aqueous solution to 10. Into the mixture,  
 is dropped 1846g 30% 3-chloro-2-hydroxypropyl-N-stearyl  
 -N,N-dimethylammonium chloride aqueous solution over 2 hrs. with the pH maintained with 40% NaOH aqueous solution at 10. The mixture is stirred for 6 hrs.

under heating and treated with an electrodialyser and the dialysed concentrate is partially dried up to give N-lauryl-N-(3-(N'-stearyl-N',N'-dimethylammonio)-2-hydroxypropylamine chloride of formula (IV).

USE/ADVANTAGE - The cationic cpds. have surface activity and are useful as hair rinse bases with mild action to the human skin and flexibility.

In an example, an aliphatic prim. amine or formula R1NH2 and a cation-giving agent of formula (II) or (III) are reacted together to give a cationic cpd. of formula (I). In (II), Z = halo.

0/0

Dwg.0/0

FILE SEGMENT: CPI  
 FIELD AVAILABILITY: AB; GI; DCN  
 MANUAL CODES: CPI: D08-B04; D11-A02B; E10-A22C

L101 ANSWER 29 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1992-180875 [22] WPIX

DOC. NO. CPI: C1992-083019  
TITLE: Di-tetra alkyl-**ammonium carbonates**  
mfr. - by **decarbonation** of mono tetra  
alkyl-ammonium cpd. by reaction with water.  
DERWENT CLASS: E14 E16  
PATENT ASSIGNEE(S): (MITC) MITSUI PETROCHEM IND CO LTD  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 04120046	A	19920421	(199222)*		3	C07C211-63<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 04120046	A	JP 1990-238756	19900907

PRIORITY APPLN. INFO: JP 1990-238756 19900907

INT. PATENT CLASSIF.:

MAIN: C07C211-63

SECONDARY: C07C209-68

## BASIC ABSTRACT:

JP 04120046 A UPAB: 19931006

Di-tetraalkyl **ammonium carbonate** of formula (I) is  
mfd. by decarbonisation of mono-tetraalkyl ammonium cpd. of formula (II)  
by reaction with water. Where R1 = 1-22C alkyl, R2 = 1-4C alkyl and R3 =  
H, alkyl or aryl.

USE/ADVANTAGE - Method is carried out under milder conditions and can  
give ditetraalkyl **ammonium carbonates** in a high yield.

In an example a mixture of 31.4g 29 weight% **tetramethylammonium**  
**methyl carbonate** methanol solution and 22.1g water was reacted for  
16 hours at 80 deg.C under ordinary temperature under stirring with mol. ratios  
of **tetramethylammonium methyl carbonate**/ditetra  
**methylammonium carbonate** in the reaction solution after 0,  
4, 8 and 16 hour of 96/4, 79/21, 74/26 and 65/35.  
0/0

FILE SEGMENT: CPI  
FIELD AVAILABILITY: AB; GI; DCN  
MANUAL CODES: CPI: E10-A11B

L101 ANSWER 30 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1991-298750 [41] WPIX

DOC. NO. CPI: C1991-129229

TITLE: Di tetra alkyl-**ammonium carbonate**  
preparation for electrolyte solute - by reacting mono tetra  
alkyl ammonium cpd. with tetra alkyl **ammonium**  
**hydroxide** under normal temperature and pressure for  
high yield.

DERWENT CLASS: E14 E16 L03  
PATENT ASSIGNEE(S): (MITC) MITSUI PETROCHEM IND CO LTD  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 03197450	A	19910828	(199141)*		3		
JP 2913711	B2	19990628	(199931)		4	C07C209-68<--	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03197450	A	JP 1989-337094	19891226
JP 2913711	B2	JP 1989-337094	19891226

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 2913711	B2 Previous Publ.	JP 03197450

PRIORITY APPLN. INFO: JP 1989-337094 19891226

INT. PATENT CLASSIF.: C07C211-63

MAIN: C07C209-68

SECONDARY: C07C211-63

## BASIC ABSTRACT:

JP 03197450 A UPAB: 19930928

Preparation of ditetra **alkylammonium carbonate** by reacting monotetra alkyl ammonium cpd. of formula R1R2NOC(O)OR3 (I) with tetra alkyl **ammonium hydroxide** is new: R1 is 1-22C alkyl; R2 is 1-4C alkyl; R3 is H, alkyl or aryl gp.; R1's may be same or different; R1, R2 and R3 may be same or different from one another.

USE/ADVANTAGE - **Ditetraalkylammonium carbonate**, which is useful as material of solute of electrolyte, can be prepared in high yield under conditions of normal temps. and pressures.

In an example, to 4.4 g of aqueous solution of 57.6 weight% of tetramethyl **ammonium hydroxide** ((CH<sub>3</sub>)<sub>4</sub>NOH, TMAH) was added 6.8 g of aqueous solution of 55 weight% of tetramethyl **ammonium carbonate** ((CH<sub>3</sub>)<sub>4</sub>NOC(=O)OH), and reaction was carried out for 30 minutes under normal temps. and pressures while stirring. After completion of reaction, reaction prod. was subjected to analysis to reveal that **ditetramethylammonium carbonate** ((CH<sub>3</sub>)<sub>4</sub>NOC(=O) ON(CH<sub>3</sub>)<sub>4</sub>, as DTMAC) was produced in yield of 97.8 mol.%. To 5.0 g of aqueous solution of

20

weight% TMAH was added 1.7 g of tetramethyl **ammonium methyl carbonate** ((CH<sub>3</sub>)<sub>4</sub>NOC(=O)OCH<sub>3</sub>), and reaction was carried out for 30 minutes under normal temps. and pressure while stirring. DTMAC was produced at yield of 96 mol.%.  
0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: E05-S; E10-A22G; E31-N05D; L03-E01C

L101 ANSWER 31 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1991-159342 [22] WPIX

DOC. NO. CPI: C1991-068785

TITLE: Preparation of highly pure quat. **ammonium hydroxide** - by electrodialysis of solution of quat. ammonium salt and polar organic solvent.

DERWENT CLASS: B05 E19 L03

PATENT ASSIGNEE(S): (TOYN) TOYO GOSEI KOGYO KK

COUNTRY COUNT: 1

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 03093752	A	19910418	(199122)*		9		

JP 2805053 B2 19980930 (199844) 10 C07C211-63&lt;--

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03093752	A	JP 1989-228959	19890904
JP 2805053	B2	JP 1989-228959	19890904

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 2805053	B2 Previous Publ.	JP 03093752

PRIORITY APPLN. INFO: JP 1989-228959 19890904  
 INT. PATENT CLASSIF.: C07C211-62; C25B003-00  
 MAIN: C07C211-63  
 SECONDARY: C07C209-68; C07C211-62; C07C211-64;  
 C25B003-00

## BASIC ABSTRACT:

JP 03093752 A UPAB: 19980715

Preparation of quat. ammonium hydroxide, comprises subjecting a solution of quat. ammonium salt of formula (I) (wherein R1, R2, R3 and R4 = independently an organic substituent; X = acid radical) in at least one species of polar organic solvents selected from mono- or di-valent alcohol having 1-6C saturated hydrocarbon as the skeleton, 2-3C lower saturated nitrile, 3-6C lower saturated dialkyl acid amide and 3-6C lower alkylene glycol monoalkyl ether, or a solution of same in a mixture of the above-mentioned organic solvent and water to electrodialysis using anion-exchange membrane at a temperature of 45 deg.C or below and a concentration of

the quat. ammonium salt of 30 weight% or lower to thereby convert the quat. ammonium salt into highly pure ammonium hydroxide.

USE/ADVANTAGE - Quat. ammonium hydroxide of high purity, which is useful in various fields, e.g., as a solute of electrolytic solution for electrolytic capacitor or a material of pharmaceuticals, can be prepared with industrial advantage.

Dwg.0/0

FILE SEGMENT: CPI  
 FIELD AVAILABILITY: AB; DCN  
 MANUAL CODES: CPI: B10-A22; E10-A22E; L03-B03A

L101 ANSWER 32 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1989-273380 [38] WPIX

DOC. NO. CPI: C1989-120909

TITLE: Quaternary ammonium organic acid salts production - using quat. ammonium methyl carbonate(s), water, and organic acid anhydride(s).

DERWENT CLASS: E19 J04

PATENT ASSIGNEE(S): (MITP) MITSUBISHI PETROCHEMICAL CO LTD

COUNTRY COUNT: 1

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
JP 01197462	A	19890809	(198938)*		4		
JP 08030047	B2	19960327	(199617)		4	C07C211-63<--	

## APPLICATION DETAILS:



PATENT NO	KIND	APPLICATION	DATE
JP 01197462	A	JP 1988-23336	19880203
JP 08030047	B2	JP 1988-23336	19880203

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 08030047	B2 Previous Publ.	JP 01197462

PRIORITY APPLN. INFO: JP 1988-23336 19880203  
 INT. PATENT CLASSIF.: C07B043-00; C07C085-00; C07C087-30; C07D295-02  
 MAIN: C07C211-63  
 SECONDARY: C07B043-00; C07B043-04; C07C085-00; C07C087-30;  
 C07C209-68; C07D295-02

## BASIC ABSTRACT:

JP 01197462 A UPAB: 19950921

Reaction of quat. **ammonium methylcarbonates**, water, and organic acid anhydrides to produce corresp. quat. ammonium organic acid salts is performed by dissolving quat. **ammonium methylcarbonates** in water, expelling methanol formed to the outside of the system, mixing with organic acid anhydride, and expelling carbon dioxide gas formed to the outside of the system.

The reaction follows formula (1) and (2), where HAN = an organic acid anhydride; and A = a conjugated base of HAN. Process (1) is carried out at pref. 20-80 deg.C. The amount of water used is pref. 0.5-10 to quat. **ammonium methyl-carbonate** by weight ratio. Methanol is removed to pref. below 6.0% content to quat. **ammonium hydrogen carbonate** formed. Process (2) is performed at pref. 20-80 deg.C in the presence of water. The organic acid anhydride is used in an amount of theoretical or small excess to the quat. **ammonium hydrogen carbonate**.

USE/ADVANTAGE - Quat. ammonium organic acid salts, widely used as phase-to-phase transfer catalysts, electrolytes for electrolytic solns. of water or organic systems, and various additives or chemicals, may be efficiently produced in high purities.

0/0

Dwg. 0/0

FILE SEGMENT: CPI  
 FIELD AVAILABILITY: AB; DCN  
 MANUAL CODES: CPI: E10-A22; J04-E04

L101 ANSWER 33 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1988-221202 [32] WPIX  
 DOC. NO. NON-CPI: N1988-168714  
 DOC. NO. CPI: C1988-098668  
 TITLE: Production of high purity quat. **ammonium**

**hydroxide** - by electrolysing solution of quat. **ammonium hydrogen carbonate**.

DERWENT CLASS: A85 E14 E16 J03 L03 U11  
 INVENTOR(S): AOYAMA, T; ISHIKAWA, J; SAKURAI, N; SHIMA, E  
 PATENT ASSIGNEE(S): (MITN) MITSUBISHI GAS CHEM CO INC  
 COUNTRY COUNT: 6  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 269949	A	19880608	(198832)*	EN	34		

R: BE DE GB NL  
 JP 63132862 A 19880604 (198835)  
 JP 63132863 A 19880604 (198835)  
 JP 63134684 A 19880607 (198835)  
 US 4776929 A 19881011 (198843) 8  
 EP 269949 B1 19930421 (199316) EN 13 C25B003-04  
 R: BE DE GB NL  
 DE 3785548 G 19930527 (199322) C25B003-04  
 JP 07042255 B2 19950510 (199523) 3 C07C211-62<--  
 JP 07042256 B2 19950510 (199523) 3 C07C211-62<--  
 JP 2643128 B2 19970820 (199738) 4 C25B003-00

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 269949	A	EP 1987-117020	19871118
US 4776929	A	US 1987-120150	19871112
EP 269949	B1	EP 1987-117020	19871118
DE 3785548	G	DE 1987-3785548	19871118
		EP 1987-117020	19871118
JP 07042255	B2	JP 1986-278754	19861125
JP 07042256	B2	JP 1986-278755	19861125
JP 2643128	B2	JP 1986-278753	19861125

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 3785548	G Based on	EP 269949
JP 07042255	B2 Based on	JP 63132862
JP 07042256	B2 Based on	JP 63132863
JP 2643128	B2 Previous Publ.	JP 63134684

PRIORITY APPLN. INFO: JP 1986-278753 19861125; JP  
 1986-278754 19861125; JP  
 1986-278755 19861125

REFERENCE PATENTS: No-SR.Pub; 1.Jnl.Ref; LU 55091; US 4634509

## INT. PATENT CLASSIF.:

MAIN: C07C211-62; C25B003-00; C25B003-04  
 SECONDARY: C07C085-00; C07C087-00; C07C091-26; C07C093-02;  
 C07C209-20; C07C209-68; C07C211-00; C07C211-64;  
 C07C215-40; C07C217-04; C25B013-08; C25C001-00

## BASIC ABSTRACT:

EP 269949 A UPAB: 19930923

A high purity quat. **ammonium hydroxide** (I) is obtained by hydrolysing a quat. **ammonium hydrogen carbonate** (II) in an electrolytic cell comprising anode and cathode compartments defined by a cation exchange membrane, where R1, R2, R3, R4 each = 1-8C or hydroxyalkyl, 2-9C alkoxyalkyl, aryl or hydroxyaryl.

(II) may be obtd. for use in the above process by reacting a tert. amine (III) with a dialkyl or diaryl carbonate (IV) in presence of water, or by reacting a quat. **ammonium monoalkyl carbonate** or quat. **ammonium monoaryl carbonate** (V) with water.  
 R1-R4 = as above; R5 = 2-8C alkyl, or aryl.

USE/ADVANTAGE - Quat. **ammonium hydroxides** are of use in the electronics and semiconductor industry as cleaners, etchants and developers in production of integrated circuits. A high purity product is difficult to produce by prior presence via. the quat. **ammonium halides** or sulphates. Present process is highly efficient.

0/0

FILE SEGMENT: CPI EPI  
FIELD AVAILABILITY: AB; GI; DCN  
MANUAL CODES: CPI: A12-E09; A12-M; E10-A22A; E10-A22E  
; E10-A22G; J03-B; L04-C06; L04-C07C;  
L04-C09  
EPI: U11-A09

ABEQ EP 269949 B UPAB: 19930923

A process for producing a high purity quaternary **ammonium hydroxide** which comprises electrolyzing a quaternary **ammonium hydrogencarbonate** represented by the general formula  $(R_1R_2NR_3R_4)HCO_3$  (I): (wherein  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  may be the same or different and are each an alkyl group or hydroxyalkyl group having 1 to 8 carbon atoms, an alkoxyalkyl group having 2 to 9 carbon atoms, or an aryl group or hydroxyaryl group), which has been prepared by reacting a tertiary amine represented by the general formula  $(R_1R_2R_3)3N$  (II) (wherein  $R_1$ ,  $R_2$  and  $R_3$  may be the same or different and are each an alkyl group or hydroxyalkyl group having 1 to 8 carbon atoms, an alkoxyalkyl group having 2 to 9 carbon atoms, or an aryl group or hydroxyaryl group) with a dialkyl carbonate or diaryl carbonate represented by the general formula  $R_4OCOR_5$  (III): (wherein  $R_4$  is an alkyl group or hydroxyalkyl group having 1 to 8 carbon atoms, an alkoxyalkyl group having 2 to 9 carbon atoms, or an aryl group or hydroxyaryl group, and  $R_5$  is an alkyl group having 1 to 8 carbon atoms or an aryl group) in the presence of a solvent at a temperature of from 40 to 250 deg. C, in an electrolytic cell comprising an anode compartment containing the quaternary **ammonium hydrogen carbonate** of formula (I) and a cathode compartment defined by a cation exchange membrane, characterised in that the reaction of the compound of formula (II) with the compound of formula (III) water is used as a solvent.

0/0

ABEQ US 4776929 A UPAB: 19930923

A quat. **ammonium hydroxide** is produced by hydrolysis of a cpd.  $(R_4N)HCO_3$  in an electrolysis cell divided into electrode chambers by a cation exchange membranes. In the formula each R is 1-8C (OH)alkyl, 2-9C alkoxyalkyl or (OH)aryl. The membrane is pref. made of an F-contg. polymer, esp. contg. cation exchange gps, or a styrene/divinylbenzene copolymer contg. ion exchange gps. The anode is made of C, Pt or Ti coated with Pt oxide. The cathode is made of stainless steel or Ni. The cell is made of corrosion resistant F-contg. polymer or polypropene. The electrolysis is carried out at a current density 3-50 A/dm<sup>2</sup> and at 10-50 deg.C.

ADVANTAGE - High pu rity quat. **ammonium hydroxide** can be produced with high efficiency.

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YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y

L101 ANSWER 34 OF 34 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:164573 BIOSIS  
DOCUMENT NUMBER: PREV200100164573  
TITLE: Quaternary ammonium carbonate compositions and preparation thereof.  
AUTHOR(S): Walker, Leigh E. [Inventor, Reprint author]  
CORPORATE SOURCE: Macungie, PA, USA  
ASSIGNEE: Lonza, Inc., Annandale, NJ, USA  
PATENT INFORMATION: US 6090855 July 18, 2000  
SOURCE: Official Gazette of the United States Patent and Trademark

Office Patents, (July 18, 2000) Vol. 1236, No. 3. e-file.  
CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent  
LANGUAGE: English  
ENTRY DATE: Entered STN: 4 Apr 2001  
Last Updated on STN: 15 Feb 2002

ED Entered STN: 4 Apr 2001

Last Updated on STN: 15 Feb 2002

AB Quaternary **ammonium carbonates** having the  
**formula ##STR1##** wherein R1 is a C1 -C20 alkyl or aryl-substituted  
alkyl group and R2 is a C8 -C20 alkyl group have been synthesized. These  
compounds and compositions further comprising the corresponding quaternary  
ammonium bicarbonate **##STR2##** wherein R1 is the same or a different C1  
-C20 alkyl or aryl-substituted alkyl group and R2 is the same or a  
different C8 -C20 alkyl group and/or the corresponding quaternary ammonium  
metal carbonate **##STR3##** wherein R1 is the same or a different C1 -C20  
alkyl or aryl-substituted alkyl group; R2 is the same or a different C8  
-C20 alkyl group and M is a non-coupler metal, are prepared by reacting  
two reactants, a C1 -C20 alkyl or aryl-substituted alkyl, C8 -C20 alkyl  
quaternary **ammonium chloride** and a metal hydroxide, in  
a solvent comprising a C1 -C4 normal **alcohol**. The amount of  
metal chloride reactant is that amount sufficient to yield the C1 -C20  
alkyl or aryl-substituted alkyl, C8 -C20 alkyl quaternary **ammonium**  
hydroxide, a metal **chloride**, and optionally unreacted metal  
hydroxide. The resultant quaternary ammonium hydroxide and any unreacted  
metal hydroxide are then reacted with carbon dioxide to **yield**  
the quaternary **ammonium carbonate** and optionally metal  
carbonate. Also provided is a method for **preserving** a  
**wood** substrate. Accordingly, the substrate is treated with a  
metal coupler-free **wood preservative** system comprising  
a biocidal effective amount of the carbonate quats above, preferably those  
prepared by the method above, and a solvent.

NCL 514642000

CC General biology - Miscellaneous 00532

IT Major Concepts

Chemistry; Methods and Techniques

IT Chemicals & Biochemicals

quaternary ammonium carbonates: **wood preservative**

IT Miscellaneous Descriptors

**wood products**

=> file stnguide

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Apr 22, 2005 (20050422/UP).

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L100 8 S L98-L99

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L7 QUE ABB=ON PLU=ON (?AMMON? OR NH4# OR NH4)  
L8 QUE ABB=ON PLU=ON (OH OR OH# OR ?HYDROX?)  
L93 6068 SEA TSENG, C?/AU  
L94 6355 SEA WALKER, L?/AU  
L95 133 SEA (L93 OR L94) AND L7  
L96 21 SEA L95 AND L8  
L97 16 DUP REM L96 (5 DUPLICATES REMOVED)  
L98 4 SEA L97 AND (?ALCOHOL? OR ALC)  
L99 7 SEA L97 AND LONZA/BI,CS,SO,PA  
L100 8 SEA (L98 OR L99)

=> d que l5

L1 1248 SEA FILE=HCAPLUS ABB=ON PLU=ON TSENG, C?/AU  
L2 988 SEA FILE=HCAPLUS ABB=ON PLU=ON WALKER, L?/AU  
L3 50 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2) AND AMMONI?/OBI  
L4 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND ?HYDROXID?/OBI  
L5 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND LONZA/BI,CS,SO,CS

=> dup rem l5 l100

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PROCESSING COMPLETED FOR L5

PROCESSING COMPLETED FOR L100

L102 8 DUP REM L5 L100 (1 DUPLICATE REMOVED)  
ANSWER '1' FROM FILE HCAPLUS  
ANSWERS '2-4' FROM FILE BIOSIS  
ANSWER '5' FROM FILE JICST-EPLUS  
ANSWERS '6-8' FROM FILE WPIX

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YOU HAVE REQUESTED DATA FROM 8 ANSWERS - CONTINUE? Y/(N):y

L102 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 1995:740914 HCAPLUS

DOCUMENT NUMBER: 123:115967

TITLE: Preparation of quaternary ammonium compounds  
and waterproofing/preservative compositions for wood  
INVENTOR(S): Walker, Leigh  
PATENT ASSIGNEE(S): Lonza Inc., USA  
SOURCE: PCT Int. Appl., 105 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9428715	A1	19941222	WO 1994-US6699	19940609
W: AT, AU, BB, BG, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5399762	A	19950321	US 1993-74313	19930609
US 5438034	A	19950801	US 1993-74312	19930609
US 5641726	A	19970624	US 1993-74136	19930609
ZA 9403999	A	19950203	ZA 1994-3999	19940607
CA 2162128	AA	19941222	CA 1994-2162128	19940609
CA 2162128	C	20031014		
CA 2315849	AA	19941222	CA 1994-2315849	19940609
CA 2365054	AA	19941222	CA 1994-2365054	19940609
CA 2365054	C	20040406		
CA 2365298	AA	19941222	CA 1994-2365298	19940609
CA 2365298	C	20040413		
AU 9471076	A1	19950103	AU 1994-71076	19940609
EP 702517	A1	19960327	EP 1994-920194	19940609
EP 702517	B1	20040915		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08511543	T2	19961203	JP 1994-502177	19940609
IL 122727	A1	19990312	IL 1994-122727	19940609
IL 122728	A1	19990312	IL 1994-122728	19940609
IL 122729	A1	19990312	IL 1994-122729	19940609
IL 122730	A1	19990312	IL 1994-122730	19940609
IL 109964	A1	19990922	IL 1994-109964	19940609
IL 124041	A1	20000131	IL 1994-124041	19940609
TW 427879	B	20010401	TW 1994-83105244	19940609
EP 1114704	A2	20010711	EP 2001-100855	19940609
EP 1114704	A3	20010808		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
EP 1122044	A1	20010808	EP 2001-101120	19940609
EP 1122044	B1	20050420		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
EP 1121857	A1	20010808	EP 2001-101121	19940609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI				
AT 275822	E	20041015	AT 1994-920194	19940609
US 5559155	A	19960924	US 1994-349448	19941205
US 5523487	A	19960604	US 1995-410888	19950327
US 5700841	A	19971223	US 1996-635431	19960418
US 5891921	A	19990406	US 1996-635430	19960418
US 6090855	A	20000718	US 1996-635441	19960418
US 5760088	A	19980602	US 1996-676464	19960708

US 5855817	A	19990105	US 1997-890130	19970709
US 6087303	A	20000711	US 1997-890949	19970710
PRIORITY APPLN. INFO.:			US 1993-74136	A 19930609
			US 1993-74312	A 19930609
			US 1993-74313	A 19930609
			US 1993-74314	A 19930609
			CA 1994-2162128	A3 19940609
			EP 1994-920194	A3 19940609
			IL 1994-109964	A3 19940609
			WO 1994-US6699	W 19940609
			US 1994-349448	A3 19941205
			US 1995-410888	A3 19950327
			US 1996-635431	A1 19960418

OTHER SOURCE(S): MARPAT 123:115967

ED Entered STN: 17 Aug 1995

AB C1-20 alkyl or aryl-substituted alkyl and C8-20 alkyl quaternary ammonium hydroxides are prepared by reacting C1-20 alkyl or aryl-substituted alkyl and C8-20 alkyl quaternary ammonium chlorides with metal hydroxides in a C1-4 normal alc. solvent, the metal hydroxide being in an amount sufficient to yield the hydroxides. Quaternary ammonium carboxylates and carbonates wood preservatives are also claimed. Didecyldimethylammonium chloride (I) was treated in aqueous ethanol was treated with a stoichiometric amount of KOH to give didecyldimethylammonium hydroxide (II). Wood pieces were soaked in a solution of II for 24 h to give a weight pickup of 2.5%, soaked in water for 24 h and then 96 h to give retention of II 92% and 72%, resp., compared to I with 24 h uptake 0.6% and retention of 83% and 67%, (0.4% weight uptake for water alone).

IC ICM A01N031-14

ICS A01N033-12; A01N037-02; A01N037-06; A01N037-10; A01N043-16;  
B27K003-00; B27K003-34; B27K003-36; B27K003-38; B27K003-50;  
B27K003-52; C07C043-13; C07C043-205; C07C053-10; C07C53 -122; C07C53  
-124; C07C53 -126; C07C69 -67; C07C69 -675

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

ST quaternary **ammonium** wood preservative; didecyldimethylammonium  
**hydroxide** carboxylate wood preservative; waterproofing wood  
preservative compn

IT Wood preservatives

(didecyldimethylammonium **hydroxide**, carboxylates and  
carbonates; manufacture and use of)

IT 124-38-9, Carbon dioxide, reactions 1310-58-3, Potassium

**hydroxide**, reactions 1310-73-2, Sodium **hydroxide**

(Na(OH)), reactions 7173-51-5, Didecyldimethylammonium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(in wood preservative composition preparation)

L102 ANSWER 2 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:164573 BIOSIS

DOCUMENT NUMBER: PREV200100164573

TITLE: Quaternary **ammonium** carbonate compositions and  
preparation thereof.

AUTHOR(S): Walker, Leigh E. [Inventor, Reprint author]

CORPORATE SOURCE: Macungie, PA, USA

ASSIGNEE: Lonza, Inc., Annandale, NJ, USA

PATENT INFORMATION: US 6090855 July 18, 2000

SOURCE: Official Gazette of the United States Patent and Trademark  
Office Patents, (July 18, 2000) Vol. 1236, No. 3. e-file.  
CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent

LANGUAGE: English

ENTRY DATE: Entered STN: 4 Apr 2001

Last Updated on STN: 15 Feb 2002

ED Entered STN: 4 Apr 2001

Last Updated on STN: 15 Feb 2002

AB Quaternary **ammonium** carbonates having the formula ##STR1## wherein R1 is a C1 -C20 alkyl or aryl-substituted alkyl group and R2 is a C8 -C20 alkyl group have been synthesized. These compounds and compositions further comprising the corresponding quaternary **ammonium** bicarbonate ##STR2## wherein R1 is the same or a different C1 -C20 alkyl or aryl-substituted alkyl group and R2 is the same or a different C8 -C20 alkyl group and/or the corresponding quaternary **ammonium** metal carbonate ##STR3## wherein R1 is the same or a different C1 -C20 alkyl or aryl-substituted alkyl group; R2 is the same or a different C8 -C20 alkyl group and M is a non-coupler metal, are prepared by reacting two reactants, a C1 -C20 alkyl or aryl-substituted alkyl, C8 -C20 alkyl quaternary **ammonium** chloride and a metal **hydroxide**, in a solvent comprising a C1 -C4 normal **alcohol**. The amount of metal chloride reactant is that amount sufficient to yield the C1 -C20 alkyl or aryl-substituted alkyl, C8 -C20 alkyl quaternary **ammonium hydroxide**, a metal chloride, and optionally unreacted metal **hydroxide**. The resultant quaternary **ammonium hydroxide** and any unreacted metal **hydroxide** are then reacted with carbon dioxide to yield the quaternary **ammonium** carbonate and optionally metal carbonate. Also provided is a method for preserving a wood substrate. Accordingly, the substrate is treated with a metal coupler-free wood preservative system comprising a biocidal effective amount of the carbonate quats above, preferably those prepared by the method above, and a solvent.

NCL 514642000

CC General biology - Miscellaneous 00532

IT Major Concepts

Chemistry; Methods and Techniques

IT Chemicals &amp; Biochemicals

quaternary **ammonium** carbonates: wood preservative

IT Miscellaneous Descriptors

wood products

L102 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:109053 BIOSIS

DOCUMENT NUMBER: PREV200200109053

TITLE: Quaternary **ammonium hydroxide** compositions and preparation thereof.

AUTHOR(S): Walker, L. E. [Inventor]

CORPORATE SOURCE: Macungie, Pa., USA

ASSIGNEE: LONZA INC.

PATENT INFORMATION: US 5760088 June 2, 1998

SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (June 2, 1998) Vol. 1211, No. 1, pp. 559. print.

CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent

LANGUAGE: English

ENTRY DATE: Entered STN: 24 Jan 2002

Last Updated on STN: 26 Feb 2002

ED Entered STN: 24 Jan 2002

Last Updated on STN: 26 Feb 2002

NCL 514642000

CC Biochemistry studies - General 10060

Disinfection, disinfectants and sterilization - 39500

Plant physiology - Metabolism 51519

Forestry and forest products 53500



IT Major Concepts  
Biochemistry and Molecular Biophysics; Forestry; Pharmacology

IT Miscellaneous Descriptors  
chemical industry; BIOCIDES; QUATERNARY AMMONIUM  
HYDROXIDE; WOOD PRESERVATIVE

L102 ANSWER 4 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
ACCESSION NUMBER: 2002:49556 BIOSIS  
DOCUMENT NUMBER: PREV200200049556  
TITLE: Quaternary ammonium hydroxide  
compositions and preparation thereof.  
AUTHOR(S): Walker, L. E. [Inventor]  
CORPORATE SOURCE: Macungie, Pa., USA  
ASSIGNEE: LONZA INC.  
PATENT INFORMATION: US 5559155 Sept. 24, 1996  
SOURCE: Official Gazette of the United States Patent and Trademark  
Office Patents, (Sept. 24, 1996) Vol. 1190, No. 4, pp.  
2920. print.  
CODEN: OGUPE7. ISSN: 0098-1133.  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
ENTRY DATE: Entered STN: 2 Jan 2002  
Last Updated on STN: 25 Feb 2002

ED Entered STN: 2 Jan 2002  
Last Updated on STN: 25 Feb 2002

NCL 514642000

CC Biochemistry studies - General 10060  
Forestry and forest products 53500  
Public health - Miscellaneous 37019

IT Major Concepts  
Biochemistry and Molecular Biophysics; Forestry; Public Health (Allied  
Medical Sciences)

IT Miscellaneous Descriptors  
chemical industry; BIOCIDES; BIODEGRADATION RESISTANT WOOD; METAL FREE;  
WOOD PRESERVATIVE SYSTEM

L102 ANSWER 5 OF 8 JICST-EPlus COPYRIGHT 2005 JST on STN  
ACCESSION NUMBER: 850479172 JICST-EPlus  
TITLE: The effect of succinylcholine and d-tubocurarine on the  
denervated muscle in the rat.  
AUTHOR: TAKAHASHI SHUN-ICHI; KITAYAMA TAKASHI; TATEDA TAKESHI;  
OKAMOTO YASURO; KANEKO TOSHIO; NAGANO KAZUKO; YAMANAKA  
IKUO; TAKAHASHI KEIZO  
TSENG CHIN-KAI  
CORPORATE SOURCE: St. Marianna Univ. School of Medicine  
Kaohsiung Medical Coll., Taiwan  
SOURCE: Masui (Japanese Journal of Anesthesiology), (1985) vol. 34,  
no. 8, pp. 1121-1126. Journal Code: F0838A (Fig. 5, Tbl. 2,  
Ref. 15)  
CODEN: MASUAC; ISSN: 0021-4892  
PUB. COUNTRY: Japan  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: Japanese  
STATUS: New

L102 ANSWER 6 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2003-278282 [27] WPIX  
DOC. NO. CPI: C2003-072630  
TITLE: In-situ preparation of quaternary ammonium  
alkylcarbonate e.g. didecyldimethyl ammonium

methocarbonate, involves reacting amine, ester and methanol.

DERWENT CLASS: A97 C03 D22 E13 E16 F09  
 INVENTOR(S): WALKER, L E  
 PATENT ASSIGNEE(S): (LONZ) LONZA INC; (WALK-I) WALKER L E  
 COUNTRY COUNT: 100  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003006419	A1	20030123	(200327)*	EN	36
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM EC EE ES FI GB GD GE HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZW					
US 2003023108	A1	20030130	(200327)		
CN 1464873	A	20031231	(200422)		
EP 1406856	A1	20040414	(200426)	EN	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2004521953	W	20040722	(200448)		67
KR 2004029363	A	20040406	(200451)		
AU 2002316559	A1	20030129	(200452)		
BR 2002011229	A	20040810	(200455)		
US 2004162343	A1	20040819	(200455)		
US 6784307	B2	20040831	(200457)		
ZA 2004000698	A	20041229	(200505)		46
HU 2004001230	A1	20041228	(200506)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003006419	A1	WO 2002-US21236	20020702
US 2003023108	A1 Provisional	US 2001-303971P	20010709
		US 2002-188692	20020702
CN 1464873	A	CN 2002-802303	20020702
EP 1406856	A1	EP 2002-746871	20020702
		WO 2002-US21236	20020702
JP 2004521953	W	WO 2002-US21236	20020702
		JP 2003-512192	20020702
KR 2004029363	A	KR 2004-700405	20040109
AU 2002316559	A1	AU 2002-316559	20020702
BR 2002011229	A	BR 2002-11229	20020702
		WO 2002-US21236	20020702
US 2004162343	A1 Provisional Div ex	US 2001-303971P	20010709
		US 2002-188692	20020702
		US 2004-776368	20040210
US 6784307	B2 Provisional	US 2001-303971P	20010709
		US 2002-188692	20020702
ZA 2004000698	A	ZA 2004-698	20040128
HU 2004001230	A1	WO 2002-US21236	20020702
		HU 2004-1230	20020702

## FILING DETAILS:

PATENT NO	KIND	PATENT NO

EP 1406856	A1 Based on	WO 2003006419
JP 2004521953	W Based on	WO 2003006419
AU 2002316559	A1 Based on	WO 2003006419
BR 2002011229	A Based on	WO 2003006419
HU 2004001230	A1 Based on	WO 2003006419

PRIORITY APPLN. INFO: US 2001-303971P 20010709; US  
 2002-188692 20020702; US  
 2004-776368 20040210

ED 20030429

AB WO2003006419 A UPAB: 20031120

NOVELTY - An amine, an ester and methanol are reacted to form quaternary **ammonium** alkylcarbonate.

DETAILED DESCRIPTION - An amine (I), an ester (II) and methanol are reacted to form quaternary **ammonium** alkylcarbonate (III).

R1, R2 = 1-30C alkyl;

R3 = 8-30C alkyl; and

R9, R10 = 1-10C alkyl.

INDEPENDENT CLAIMS are also included for:

(1) Preparation of quaternary **ammonium** bicarbonate (IV) which involves converting quaternary **ammonium** alkylcarbonate to quaternary **ammonium** bicarbonate; and

(2) Preparation of mixture of quaternary **ammonium** bicarbonate and quaternary **ammonium** carbonate.

USE - The method is for preparing quaternary **ammonium** alkylcarbonate e.g. didecyldimethyl **ammonium** methocarbonate, dioctadimethyl **ammonium** methocarbonate, octadecyltrimethyl **ammonium** methocarbonate, trioctylmethyl **ammonium** methocarbonate and dodecyltrimethyl **ammonium** methocarbonate, used as wood preservatives.

ADVANTAGE - The in-situ preparation of quaternary **ammonium** alkyl carbonate in high yield is enabled. The method does not produce or require the handling of corrosive quaternary **ammonium** hydroxides.

Dwg.0/0

L102 ANSWER 7 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-656218 [63] WPIX

DOC. NO. NON-CPI: N2000-486460

DOC. NO. CPI: C2000-198619

TITLE: Enhancing the uniform distribution and penetration of a wood preservative into a wood substrate, such as Ponderosa pine sapwood, comprises applying a preservative composition, containing at least one amine oxide.

DERWENT CLASS: C03 D22 E19 F09 P63

INVENTOR(S): SHEN, S; WALKER, L E

PATENT ASSIGNEE(S): (LONZ) LONZA INC

COUNTRY COUNT: 90

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG
WO 2000059696	A2 20001012	(200063)*	EN	30
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL				
OA PT SD SE SL SZ TZ UG ZW				
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES				
FI GB GD GE HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU				
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR				
TT TZ UA UG US UZ VN YU ZA ZW				
AU 2000044548	A 20001023	(200107)		

EP 1165297 A2 20020102 (200209) EN  
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI  
 US 2002061366 A1 20020523 (200239)  
 US 6485790 B2 20021126 (200281)  
 NZ 515309 A 20030530 (200341)  
 AU 774425 B2 20040624 (200468)

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000059696	A2	WO 2000-US9649	20000407
AU 2000044548	A	AU 2000-44548	20000407
EP 1165297	A2	EP 2000-925929	20000407
		WO 2000-US9649	20000407
US 2002061366	A1 Provisional	US 1999-128376P	19990408
	Cont of	WO 2000-US9649	20000407
		US 2001-972839	20011005
US 6485790	B2 Provisional	US 1999-128376P	19990408
	Cont of	WO 2000-US9649	20000407
		US 2001-972839	20011005
NZ 515309	A	NZ 2000-515309	20000407
		WO 2000-US9649	20000407
AU 774425	B2	AU 2000-44548	20000407

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000044548	A Based on	WO 2000059696
EP 1165297	A2 Based on	WO 2000059696
NZ 515309	A Based on	WO 2000059696
AU 774425	B2 Previous Publ.	AU 2000044548
	Based on	WO 2000059696

PRIORITY APPLN. INFO: US 1999-128376P 19990408; US  
 2001-972839 20011005

ED 20001205

AB WO 200059696 A UPAB: 20001205

NOVELTY - Enhancing the uniform distribution and penetration of at least one wood preservative into a wood substrate comprises applying a preservative composition, containing at least one amine oxide, to the wood substrate.

DETAILED DESCRIPTION - Enhancing the uniform distribution and penetration of at least one wood preservative into a wood substrate comprises applying a preservative composition (I) to the wood substrate. (I) comprises: (a) a wood distribution enhancing agent comprising one or more amine oxides; and (b) the wood preservative.

An INDEPENDENT CLAIM is also included for a wood preservative composition comprising an amine of formula (H) or a salt of (H), and an amine oxide.

R23a - R25a = optionally unsaturated, linear, branched or cyclic group, together having a total of 10-50C.

USE - The method is used for enhancing the distribution and penetration of wood preservatives into a wood substrate. Substrates include Ponderosa pine sapwood, southern yellow pine and Scots pine. Application is by brushing, dipping soaking, vacuum impregnation, or pressure treatment.

ADVANTAGE - The presence of the amine oxide in the composition

improves the wood penetration, and gives uniform preservation, preventing decay in the inner and outer regions of the wood.

Dwg.0/0

L102 ANSWER 8 OF 8 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-656696 [64] WPIX  
 CROSS REFERENCE: 1998-332895 [29]  
 DOC. NO. CPI: C2000-198796  
 TITLE: New quaternary ammonium salts of sulfonylurea derivatives are useful as pesticides, herbicides, fungicides, and plant growth regulating agents.  
 DERWENT CLASS: A97 C02 C03  
 INVENTOR(S): CHEN, C; TIROL, A A; TSENG, C; WYSONG, R D  
 PATENT ASSIGNEE(S): (DUPO) DU PONT DE NEMOURS & CO E I; (LONZ) LONZA INC  
 COUNTRY COUNT: 2  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CA 2272597	A1	20000725	(200064) *	EN	25
US 6225260	B1	20010501	(200126)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CA 2272597	A1	CA 1999-2272597	19990521
US 6225260	B1	US 1996-32019P	19961122
	CIP of	WO 1997-US21383	19971119
	Provisional	US 1999-117222P	19990125
		US 1999-315391	19990520

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6225260	B1	WO 9821963

PRIORITY APPLN. INFO: US 1999-117222P 19990125; US  
 1996-32019P 19961122; WO  
 1997-US21383 19971119; US  
 1999-315391 19990520

ED 20001209

AB CA 2272597 A UPAB: 20020502

NOVELTY - Quaternary ammonium salts of sulfonylurea derivatives (I) and (II), e.g. benzethonium salts of nicosulfuron; are new.

DETAILED DESCRIPTION - Quaternary ammonium salts of sulfonylurea derivatives, of formulae (I) and (II), are new.

R1 = optionally substituted phenyl, heterocyclic or phenoxy, or N(CH<sub>3</sub>)(SO<sub>2</sub>CH<sub>3</sub>);

R2 = H or CH<sub>3</sub>;

R3 = optionally substituted pyrimidine or triazine;

R4, R5 = optionally hydroxy-substituted 1-4C alkyl, (CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub>CH<sub>2</sub>CH<sub>2</sub>OH, or (CH<sub>2</sub>CHCH<sub>3</sub>O)<sub>m</sub>CH<sub>2</sub>CH(CH<sub>3</sub>)OH;

m = 1-10;

R6 = optionally substituted benzyl, ethylbenzyl, naphthylmethyl or 1-22C alkyl;

R7 = optionally substituted 8-22C alkyl or R13(O)<sub>n</sub>(C<sub>6</sub>H<sub>5</sub>)R14;

n = 0-1;

R13 = optionally substituted 1-8C (alkoxy)alkyl;

R14 = optionally substituted 1-12C alkyl;

R15 = optionally substituted 8-22C alkyl; and

R16 = optionally substituted 1-22C alkyl.

R17 = optionally substituted alkyl.

INDEPENDENT CLAIMS are included for:

(a) a composition comprising a compound of formula (I) or (II), and a solvent;

(b) a composition comprising a compound of formula (I) or (II), and a surface active agent; and

(c) a method of preparing a quaternary ammonium salt of sulfonylurea comprising contacting a quaternary ammonium hydroxide with a sulfonylurea.

ACTIVITY - Pesticide; herbicide; fungicide; plant growth regulator.

MECHANISM OF ACTION - None given.

USE - As pesticides, herbicides, fungicides, and plant growth regulating agents.

ADVANTAGE - (I) and (II) have high water solubility and high hydrolytic stability.

Dwg.0/0

=> file stnguide

FILE 'STNGUIDE' ENTERED AT 13:48:31 ON 29 APR 2005

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Apr 22, 2005 (20050422/UP).

=>

3/3

Nwaonicha 10/705215

04/29/2005

=> d his ful

(FILE 'HOME' ENTERED AT 09:17:49 ON 29 APR 2005)

FILE 'ZCAPLUS' ENTERED AT 09:17:58 ON 29 APR 2005

E US2002-424476/APPS

E US2003-705215/APPS

E US2002-424476P/APPS

FILE 'WPIX' ENTERED AT 09:19:27 ON 29 APR 2005

E US2003-705215/AP, PRN

E US2002-424476/AP, PRN

E US2002-424476P/AP, PRN

FILE 'STNGUIDE' ENTERED AT 09:20:28 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 09:21:12 ON 29 APR 2005

L1 1248 SEA ABB=ON PLU=ON TSENG, C?/AU  
L2 988 SEA ABB=ON PLU=ON WALKER, L?/AU  
L3 50 SEA ABB=ON PLU=ON (L1 OR L2) AND AMMONI?/OBI  
L4 3 SEA ABB=ON PLU=ON L3 AND ?HYDROXID?/OBI  
D SCAN  
D BIB 1-

FILE 'STNGUIDE' ENTERED AT 09:22:55 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 09:23:30 ON 29 APR 2005

L5 1 SEA ABB=ON PLU=ON L4 AND LONZA/BI,CS,SO,CS  
SAVE TEMP L5 NWA215HCAINV/A  
D IALL

FILE 'STNGUIDE' ENTERED AT 09:24:14 ON 29 APR 2005

FILE 'WPIX' ENTERED AT 10:06:39 ON 29 APR 2005

L6 1 SEA ABB=ON PLU=ON WO1994-US6699/APPS  
SAVE TEMP L6 NWA215WPIAPP/A  
D IALL

FILE 'STNGUIDE' ENTERED AT 10:07:26 ON 29 APR 2005

D SAVED

FILE 'ZCAPLUS' ENTERED AT 10:09:13 ON 29 APR 2005

E AMMONIUM HYDROXIDES/CT

E E74+ALL

E E73+ALL

E METAL HYDROXIDES/CT

E E96+ALL

E E107

E E117+ALL

E E121+ALL

E QUATERNARY AMMONIUM COMPOUNDS/CT

E E130+ALL

E AMINOALCOHOL/CT

E ALCOHOL/CT

E ALCOHOLS/CT

E E288+NT1/CT

FILE 'STNGUIDE' ENTERED AT 11:04:02 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:10:01 ON 29 APR 2005

L7 QUE ABB=ON PLU=ON (?AMMON? OR NH4# OR NH4)  
L8 QUE ABB=ON PLU=ON (OH OR OH# OR ?HYDROX?)  
L9 QUE ABB=ON PLU=ON (?HCO3? OR CO3? OR ?CARBONAT? OR ?CARBONIC?  
OR ?BICARBON? OR (HYDROGEN(1W)CARBONAT?) OR (HYDROGEN(1W)CARBO  
NIC))  
L10 QUE ABB=ON PLU=ON (?SYNTHE? OR ?PREP? OR ?PROC? OR ?PRODUC?  
OR FORM? OR YIELD? OR GIVING OR GIVE OR GAVE)  
L11 QUE ABB=ON PLU=ON (CL OR CL# OR ?CHLOR? OR BR OR BR# OR  
?BROM? OR F OR F# OR ?FLUOR? OR I OR I# OR ?IODI? OR ?IODO?)

FILE 'STNGUIDE' ENTERED AT 11:11:18 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:12:09 ON 29 APR 2005

L12 47947 SEA ABB=ON PLU=ON QUAT?/OBI (3A) ((?AMMON?/OBI OR NH4#/OBI  
OR NH4/OBI))  
L13 1534 SEA ABB=ON PLU=ON L12 (3A) ((OH/OBI OR OH#/OBI OR ?HYDROX?/OB  
I))  
L\*\*\* DEL 47947 S L12 AND L7/OBI  
L\*\*\* DEL 47947 S L12 (L) L7/OBI  
L14 9010 SEA ABB=ON PLU=ON L12 AND ((OH/OBI OR OH#/OBI OR ?HYDROX?/OBI  
))  
L15 1971 SEA ABB=ON PLU=ON L12 AND ((?HCO3?/OBI OR CO3?/OBI OR  
?CARBONAT?/OBI OR ?CARBONIC?/OBI OR ?BICARBON?/OBI OR (HYDROGEN  
/OBI(1W)CARBONAT?/OBI) OR (HYDROGEN/OBI(1W)CARBONIC/OBI)))  
L16 5406 SEA ABB=ON PLU=ON L12 (3A) ((CL/OBI OR CL#/OBI OR ?CHLOR?/OBI  
OR BR/OBI OR BR#/OBI OR ?BROM?/OBI OR F/OBI OR F#/OBI OR  
?FLUOR?/OBI OR I/OBI OR I#/OBI OR ?IODI?/OBI OR ?IODO?/OBI))  
L17 828 SEA ABB=ON PLU=ON L14 AND L16  
L18 828 SEA ABB=ON PLU=ON L16 AND ((OH/OBI OR OH#/OBI OR ?HYDROX?/OBI  
))  
L19 186 SEA ABB=ON PLU=ON L16 AND ((?HCO3?/OBI OR CO3?/OBI OR  
?CARBONAT?/OBI OR ?CARBONIC?/OBI OR ?BICARBON?/OBI OR (HYDROGEN  
/OBI(1W)CARBONAT?/OBI) OR (HYDROGEN/OBI(1W)CARBONIC/OBI)))  
L20 5831 SEA ABB=ON PLU=ON L14 (5A) ((?SYNTHE?/OBI OR ?PREP?/OBI OR  
?PROC?/OBI OR ?PRODUC?/OBI OR FORM?/OBI OR YIELD?/OBI OR  
GIVING/OBI OR GIVE/OBI OR GAVE/OBI))  
L21 1284 SEA ABB=ON PLU=ON L15 (5A) ((?SYNTHE?/OBI OR ?PREP?/OBI OR  
?PROC?/OBI OR ?PRODUC?/OBI OR FORM?/OBI OR YIELD?/OBI OR  
GIVING/OBI OR GIVE/OBI OR GAVE/OBI))  
L22 594 SEA ABB=ON PLU=ON (L18 OR L19) AND (L20 OR L21)

FILE 'STNGUIDE' ENTERED AT 11:23:08 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:24:03 ON 29 APR 2005

L23 0 SEA ABB=ON PLU=ON L22 AND L5  
L24 1 SEA ABB=ON PLU=ON L12 AND L5  
L25 1 SEA ABB=ON PLU=ON L14 AND L5  
L26 1 SEA ABB=ON PLU=ON L20 AND L5  
D QUE L12  
D QUE L11  
L27 QUE ABB=ON PLU=ON (?HALO? OR ?HALID? OR CL OR CL# OR ?CHLOR?  
OR BR OR BR# OR ?BROM? OR F OR F# OR ?FLUOR? OR I OR I# OR  
?IODI? OR ?IODO?)  
L28 13480 SEA ABB=ON PLU=ON (?QUAT? (3A) L7) (3A) L27  
L29 1181 SEA ABB=ON PLU=ON (L20 OR L21) AND L28

FILE 'STNGUIDE' ENTERED AT 11:33:09 ON 29 APR 2005

D COST

FILE 'HCAPLUS' ENTERED AT 11:33:38 ON 29 APR 2005



L30 446202 SEA ABB=ON PLU=ON ?ALCOHOL?/OBI  
L31 183 SEA ABB=ON PLU=ON L29 AND L30  
L32 1 SEA ABB=ON PLU=ON L31 AND L5

FILE 'STNGUIDE' ENTERED AT 11:34:22 ON 29 APR 2005  
D QUE L31

FILE 'HCAPLUS' ENTERED AT 11:37:00 ON 29 APR 2005  
L33 1 SEA ABB=ON PLU=ON L31 AND WOOD?/SC, SX  
D SCAN  
L34 558 SEA ABB=ON PLU=ON "QUATERNARY AMMONIUM COMPOUNDS (L)  
HYDROXIDES"+PFT,NT/CT  
L35 172291 SEA ABB=ON PLU=ON "QUATERNARY AMMONIUM COMPOUNDS"+PFT,NT/CT  
L36 11381 SEA ABB=ON PLU=ON L35 (L) L8  
L37 1496 SEA ABB=ON PLU=ON L35 (L) L9  
L38 67938 SEA ABB=ON PLU=ON L35 (L) L27  
L39 4759 SEA ABB=ON PLU=ON L38 (L) (RACT+NT)/RL  
L40 57 SEA ABB=ON PLU=ON L37 (L) (PREP+NT)/RL  
L41 61 SEA ABB=ON PLU=ON L37 (L) (PROC+NT)/RL  
L42 104 SEA ABB=ON PLU=ON L34 (L) (PREP+NT)/RL  
L43 43 SEA ABB=ON PLU=ON L34 (L) (PROC+NT)/RL  
L44 564 SEA ABB=ON PLU=ON L36 (L) (PREP+NT)/RL  
L45 1283 SEA ABB=ON PLU=ON L36 (L) (PROC+NT)/RL

FILE 'STNGUIDE' ENTERED AT 11:42:58 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:43:18 ON 29 APR 2005  
L46 90 SEA ABB=ON PLU=ON (L42 OR L43 OR L44 OR L45) AND L39  
L47 2 SEA ABB=ON PLU=ON (L40 OR L41) AND L39  
L48 9 SEA ABB=ON PLU=ON L31 AND (L40 OR L41 OR L42 OR L43 OR L44  
OR L45)  
D QUE L29  
L49 98 SEA ABB=ON PLU=ON L29 AND (L40 OR L41 OR L42 OR L43 OR L44  
OR L45)  
L50 13 SEA ABB=ON PLU=ON (L46 OR L47 OR L48 OR L49) AND L30  
D SCAN

FILE 'STNGUIDE' ENTERED AT 11:46:18 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:50:15 ON 29 APR 2005  
L51 9 SEA ABB=ON PLU=ON L50 AND (L40 OR L42 OR L44)  
D SCAN

FILE 'STNGUIDE' ENTERED AT 11:51:15 ON 29 APR 2005  
D QUE

FILE 'HCAPLUS' ENTERED AT 11:53:33 ON 29 APR 2005  
L52 1 SEA ABB=ON PLU=ON L40 AND L16  
D SCAN

FILE 'STNGUIDE' ENTERED AT 11:54:24 ON 29 APR 2005.

FILE 'HCAPLUS' ENTERED AT 11:54:51 ON 29 APR 2005  
L53 33024 SEA ABB=ON PLU=ON L7 (3A) ((OH/OBI OR OH#/OBI OR ?HYDROX?/OBI  
) )  
L54 10581 SEA ABB=ON PLU=ON L7 (3A) ((?HCO3?/OBI OR CO3?/OBI OR  
?CARBONAT?/OBI OR ?CARBONIC?/OBI OR ?BICARBON?/OBI OR (HYDROGEN  
/OBI(1W)CARBONAT?/OBI) OR (HYDROGEN/OBI(1W)CARBONIC/OBI)))  
L55 10597 SEA ABB=ON PLU=ON (L53 OR L54) (5A) L10

FILE 'STNGUIDE' ENTERED AT 11:57:05 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 11:57:23 ON 29 APR 2005

L56 117285 SEA ABB=ON PLU=ON L7 (3A) ((?HALO?/OBI OR ?HALID?/OBI OR  
CL/OBI OR CL#/OBI OR ?CHLOR?/OBI OR BR/OBI OR BR#/OBI OR  
?BROM?/OBI OR F/OBI OR F#/OBI OR ?FLUOR?/OBI OR I/OBI OR  
I#/OBI OR ?IODI?/OBI OR ?IODO?/OBI))  
L57 2356 SEA ABB=ON PLU=ON L55 AND L56  
L58 82 SEA ABB=ON PLU=ON L55 (7A) ?ALCOHOL?  
L59 19 SEA ABB=ON PLU=ON L58 AND L57  
D SCAN

FILE 'STNGUIDE' ENTERED AT 11:59:22 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:04:21 ON 29 APR 2005

L60 2 SEA ABB=ON PLU=ON L59 AND ((TERT-AMINES)/TI OR (TETRAALKYLAMM  
ONIUM SALTS)/TI)  
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:04:58 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:06:33 ON 29 APR 2005

L61 QUE ABB=ON PLU=ON (?WATER(1W)PROOF?) OR ?PRESERV?  
L62 29 SEA ABB=ON PLU=ON L29 AND L61  
L63 16 SEA ABB=ON PLU=ON L29 AND ((?WATER/OBI(1W)PROOF?/OBI) OR  
?PRESERV?/OBI)  
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:07:47 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:17:54 ON 29 APR 2005

L64 7 SEA ABB=ON PLU=ON L63 AND (WOOD? OR ?IRRITAT? OR DISINFECTION  
)/TI  
L65 17 SEA ABB=ON PLU=ON L33 OR L51 OR L60 OR L64  
D SCAN TI

FILE 'STNGUIDE' ENTERED AT 12:18:40 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 12:19:27 ON 29 APR 2005

SAVE TEMP L65 NWA215HCA1/A

FILE 'STNGUIDE' ENTERED AT 12:19:48 ON 29 APR 2005

D SAVED

FILE 'HCAPLUS' ENTERED AT 12:34:17 ON 29 APR 2005

FILE 'WPIX' ENTERED AT 12:34:21 ON 29 APR 2005

L\*\*\* DEL 0 S (A01N033-02 OR A01N033-04 OR A01N033-12 OR C07C211-62 OR C07C  
L66 2784 SEA ABB=ON PLU=ON (A01N033-02 OR A01N033-04 OR A01N033-12 OR  
C07C211-62 OR C07C211-63)/IPC  
L67 24476 SEA ABB=ON PLU=ON (C10-A21 OR C10-A22 OR B10-A21 OR B10-A22  
OR E10-A22? OR E10-A21)/MC  
L68 10220 SEA ABB=ON PLU=ON A01N047?/IPC  
L69 15728 SEA ABB=ON PLU=ON ((?AMMON?/BIX OR NH4#/BIX OR NH4/BIX))  
(3A) ((OH/BIX OR OH#/BIX OR ?HYDROX?/BIX))  
L70 7562 SEA ABB=ON PLU=ON ((?AMMON?/BIX OR NH4#/BIX OR NH4/BIX))  
(3A) ((?HCO3?/BIX OR CO3?/BIX OR ?CARBONAT?/BIX OR ?CARBONIC?/B  
IX OR ?BICARBON?/BIX OR (HYDROGEN/BIX(1W)CARBONAT?/BIX) OR  
(HYDROGEN/BIX(1W)CARBONIC/BIX)))  
L71 55435 SEA ABB=ON PLU=ON ((?AMMON?/BIX OR NH4#/BIX OR NH4/BIX))

(3A) ((?HALO?/BIX OR ?HALID?/BIX OR CL/BIX OR CL#/BIX OR  
 ?CHLOR?/BIX OR BR/BIX OR BR#/BIX OR ?BROM?/BIX OR F/BIX OR  
 F#/BIX OR ?FLUOR?/BIX OR I/BIX OR I#/BIX OR ?IODI?/BIX OR  
 ?IODO?/BIX))

L72 2380 SEA ABB=ON PLU=ON (L66 OR L67 OR L68) AND (L69 OR L70)  
 L73 1264 SEA ABB=ON PLU=ON L72 AND L71  
 L74 4235 SEA ABB=ON PLU=ON (L69 OR L70) (5A) ((?SYNTHE?/BIX OR  
 ?PREP?/BIX OR ?PROC?/BIX OR ?PRODUC?/BIX OR FORM?/BIX OR  
 YIELD?/BIX OR GIVING/BIX OR GIVE/BIX OR GAVE/BIX))  
 L75 321 SEA ABB=ON PLU=ON L73 AND L74  
 L76 930 SEA ABB=ON PLU=ON L74 (15A) L71  
 L77 163 SEA ABB=ON PLU=ON L74 (30A) ?ALCOHOL?  
 L\*\*\* DEL 0 S L74 (30A) ?ALCOHOLBIX  
 L78 172 SEA ABB=ON PLU=ON L74 (30A) ?ALCOHOL?/BIX  
 L79 233 SEA ABB=ON PLU=ON L75 AND L76  
 L80 20 SEA ABB=ON PLU=ON L79 AND L78  
 D TRI 1-20

FILE 'STNGUIDE' ENTERED AT 12:59:28 ON 29 APR 2005

FILE 'WPIX' ENTERED AT 13:01:38 ON 29 APR 2005

L81 543 SEA ABB=ON PLU=ON C07C209-68/IPC  
 L82 62 SEA ABB=ON PLU=ON (L66 OR L67 OR L68) AND L81  
 L\*\*\* DEL 43 S L82 AND (L69-L79)  
 L83 18 SEA ABB=ON PLU=ON L82 AND ((L69 OR L70))  
 D TRI 1-18

FILE 'STNGUIDE' ENTERED AT 13:03:09 ON 29 APR 2005

FILE 'WPIX' ENTERED AT 13:05:25 ON 29 APR 2005

SAVE TEMP L83 NWA215WPI1/A

FILE 'STNGUIDE' ENTERED AT 13:05:49 ON 29 APR 2005

D SAVED

FILE 'MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, AGRICOLA, PAPERCHEM2, EMBASE,  
 SCISEARCH' ENTERED AT 13:07:33 ON 29 APR 2005

L84 14677 SEA ABB=ON PLU=ON L7(3A) L8  
 L85 6214 SEA ABB=ON PLU=ON L7(3A) L9  
 L86 154928 SEA ABB=ON PLU=ON L7(3A) L27  
 L87 2717 SEA ABB=ON PLU=ON (L84 OR L85) (5A) L10  
 L88 669 SEA ABB=ON PLU=ON L87 (L) L86  
 L89 21 SEA ABB=ON PLU=ON L88 (L) (?ALCOHOL? OR ALC)  
 D SCAN  
 L90 1 SEA ABB=ON PLU=ON L89 AND L61  
 L91 1 SEA ABB=ON PLU=ON L89 AND (?WOOD? OR ?TIMBER? OR ?LUMBER?)  
 L92 1 SEA ABB=ON PLU=ON (L90 OR L91)  
 D BIB  
 SAVE TEMP L92 NWA215MUL1/A  
 D SAVED

FILE 'STNGUIDE' ENTERED AT 13:33:13 ON 29 APR 2005

FILE 'MEDLINE, BIOSIS, PASCAL, JICST-EPLUS, AGRICOLA, PAPERCHEM2, EMBASE,  
 SCISEARCH, CANCERLIT, CONF, CONFSCI, WPIX' ENTERED AT 13:34:05 ON 29 APR  
 2005

L93 6068 SEA ABB=ON PLU=ON TSENG, C?/AU  
 L94 6355 SEA ABB=ON PLU=ON WALKER, L?/AU  
 L95 133 SEA ABB=ON PLU=ON (L93 OR L94) AND L7  
 L96 21 SEA ABB=ON PLU=ON L95 AND L8

L97 16 DUP REM L96 (5 DUPLICATES REMOVED)  
ANSWER '1' FROM FILE MEDLINE  
ANSWERS '2-6' FROM FILE BIOSIS  
ANSWER '7' FROM FILE PASCAL  
ANSWER '8' FROM FILE JICST-EPLUS  
ANSWERS '9-16' FROM FILE WPIX  
L98 4 SEA ABB=ON PLU=ON L97 AND (?ALCOHOL? OR ALC)  
L99 7 SEA ABB=ON PLU=ON L97 AND LONZA/BI,CS,SO,PA  
L100 8 SEA ABB=ON PLU=ON (L98 OR L99)  
D SCAN  
SAVE TEMP L100 NWA215MULINV/A  
D SAVED

FILE 'STNGUIDE' ENTERED AT 13:41:33 ON 29 APR 2005

FILE 'HCAPLUS' ENTERED AT 13:42:02 ON 29 APR 2005

FILE 'WPIX' ENTERED AT 13:42:07 ON 29 APR 2005

FILE 'MEDLINE' ENTERED AT 13:42:11 ON 29 APR 2005

FILE 'BIOSIS' ENTERED AT 13:42:14 ON 29 APR 2005

FILE 'JICST-EPLUS' ENTERED AT 13:42:18 ON 29 APR 2005

FILE 'AGRICOLA' ENTERED AT 13:42:22 ON 29 APR 2005

FILE 'PAPERCHEM2' ENTERED AT 13:42:26 ON 29 APR 2005

FILE 'EMBASE' ENTERED AT 13:42:30 ON 29 APR 2005

FILE 'SCISEARCH' ENTERED AT 13:42:34 ON 29 APR 2005

FILE 'CANCERLIT' ENTERED AT 13:42:38 ON 29 APR 2005

FILE 'CONF' ENTERED AT 13:42:47 ON 29 APR 2005

FILE 'CONFSCI' ENTERED AT 13:42:54 ON 29 APR 2005

FILE 'STNGUIDE' ENTERED AT 13:43:02 ON 29 APR 2005

D QUE L65

D QUE L83

D QUE L92

FILE 'HCAPLUS, WPIX, BIOSIS' ENTERED AT 13:43:54 ON 29 APR 2005

L101 34 DUP REM L65 L83 L92 (2 DUPLICATES REMOVED)  
ANSWERS '1-17' FROM FILE HCAPLUS  
ANSWERS '18-33' FROM FILE WPIX  
ANSWER '34' FROM FILE BIOSIS

D IBIB ED AB HITIND

D IBIB ED AB HITIND 2-17

D IALL ABEQ TECH ABEX 18-33

D IBIB ED AB HITIND 34-

FILE 'STNGUIDE' ENTERED AT 13:46:05 ON 29 APR 2005

D QUE L5

FILE 'HCAPLUS, BIOSIS, JICST-EPLUS, WPIX' ENTERED AT 13:47:14 ON 29 APR 2005

L102 8 DUP REM L5 L100 (1 DUPLICATE REMOVED)

ANSWER '1' FROM FILE HCAPLUS  
ANSWERS '2-4' FROM FILE BIOSIS  
ANSWER '5' FROM FILE JICST-EPLUS  
ANSWERS '6-8' FROM FILE WPIX

D QUE L8  
D QUE L100  
D IBIB ED AB HITIND L102 1-

FILE 'STNGUIDE' ENTERED AT 13:48:31 ON 29 APR 2005

FILE HOME

FILE ZCAPLUS

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FILE COVERS 1907 - 29 Apr 2005 VOL 142 ISS 19  
FILE LAST UPDATED: 28 Apr 2005 (20050428/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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FILE WPIX

FILE LAST UPDATED: 27 APR 2005 <20050427/UP>  
MOST RECENT DERWENT UPDATE: 200527 <200527/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-rev>  
FOR DETAILS. <<<

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Apr 22, 2005 (20050422/UP).

## FILE HCAPLUS

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FILE COVERS 1907 - 29 Apr 2005 VOL 142 ISS 19  
FILE LAST UPDATED: 28 Apr 2005 (20050428/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

## FILE MEDLINE

FILE LAST UPDATED: 28 APR 2005 (20050428/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

## FILE BIOSIS

FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 27 April 2005 (20050427/ED)

FILE RELOADED: 19 October 2003.

## FILE PASCAL

FILE LAST UPDATED: 25 APR 2005 <20050425/UP>  
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
IN THE BASIC INDEX (/BI) FIELD <<<

## FILE JICST-EPLUS

FILE COVERS 1985 TO 25 APR 2005 (20050425/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE AGRICOLA

FILE COVERS 1970 TO 6 Apr 2005 (20050406/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE PAPERCHEM2

FILE COVERS 1967 TO 25 Apr 2005 (20050425/ED)

FILE EMBASE

FILE COVERS 1974 TO 28 Apr 2005 (20050428/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE SCISEARCH

FILE COVERS 1974 TO 28 Apr 2005 (20050428/ED)

FILE CANCERLIT

FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE CONF

FILE LAST UPDATED: 29 APR 2005 <20050429/UP>

FILE COVERS 1976 TO DATE.

FILE CONFSCI

FILE COVERS 1973 TO 18 Mar 2005 (20050318/ED)

=>